Regret and Police Reporting Among Individuals Who Have Experienced Sexual Assault

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REGRET AND POLICE REPORTING AMONG INDIVIDUALS WHO HAVE EXPERIENCED SEXUAL ASSAULT

a dissertation

by

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Regret and Police Reporting Among Individuals Who Have Experienced Sexual Assault

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Abstract

Sexual assault (SA) is the most widely underreported violent crime in the United States. Reporting is significant because it is through this process that people access resources that can mitigate psychiatric and other health consequences of SA. The purpose of this study was to describe regret among individuals who have experienced SA regarding their decision of whether or not to report the assault to the police. The Ottawa Decision Support Framework underpins this study and posits that evaluation of regret, a powerful negative emotion, influences the decision-making process.

The sample included 78 individuals, 18-25 years, who experienced SA during the past five years. Participants completed a 34-item, electronic questionnaire. A multiple regression model was generated to describe how selected independent variables explain variation in levels of regret. In the final model, the following, combined independent variables accounted for 33.3% (adjusted R^2) of the variation in levels of regret: Weight change, the only variable associated with *increased* regret, was the most significant and accounted for the greatest amount of variance, followed by stranger assailant, seeking professional treatment, and reporting, which were associated with *decreased* regret. On average, people who chose to report their assault experienced less regret regarding their decision to do so as compared to people who did not report.

This research fills a gap in the nursing, psychiatric, and victimology literature and improves clinical practice by describing post-decisional regret. The findings from this study

provide a foundation for future research on the development of strategies (e.g., the development of decision-making tools) that nurses and other clinicians can use to assist people with their decision-making. Additionally, the findings can contribute to the development of a midrange, nursing theory of regret.

CHAPTER 1

Introduction

Statement of the Problem

The underreporting of sexual assault (SA). Despite the feminist movement of the 1970s, which marked the beginning of the era of rape reform in the United States, SA is the most widely underreported violent crime in the United States (Fisher, Daigle, Cullen, & Turner, 2003). Findings from the National Violence Against Women Survey (NVAWS) indicate that only 19.1% of the women and 12.9% of the men who were raped since their 18th birthday reported their rape to the police (Tjaden & Thoennes, 2006). Among college aged women, the reporting rates of SA are even lower. Fisher and Cullen (1999) found that 86.7% of rapes and 85.7% of sexual assaults among college women went unreported. Indeed, the underreporting of SA persists in bearing the infamous label of "the hidden crime" and poses serious problems on an individual and societal level (Koss & Orzo, 1982).

Significance and prevalence of SA. SA is a devastating, traumatic, prevalent crime that raises significant health and legal concerns. According to the National Institute of Justice (Tjaden & Thoennes, 2006), it is estimated that 17% of women and 3% of men in the United States have been raped at some time during their life. Some of the adverse health effects that result from SA include unplanned pregnancy, sexually transmitted infections (STIs), posttraumatic stress disorder (PTSD), substance abuse, and suicide (Nehls & Sallmann, 2005). Economic costs of SA, which have been estimated to be $127 billion annually, include those generated by lost productivity and expenses incurred by the criminal justice and healthcare systems (Miller, Cohen, & Wiersema, 1996). Additionally, there are significant intangible costs, which include the psychological pain and emotional suffering endured by individuals who have been sexually

assaulted (Post, Mezey, Maxwell, & Wibert, 2002). While there are stereotypes that persist about the "typical" rape victim, all individuals are at risk for being victims of SA, as it is a crime that does not discriminate on the basis of age, gender, ethnicity, or socioeconomic status (U.S. Department of Justice, 2002).

Significance of the Problem

Societal perspective. The significance of the problem of the underreporting of SA can be evaluated from two viewpoints—a societal and individual perspective. From a public safety perspective, society would benefit if more sexual assailants were convicted of their crimes and prevented from committing additional assaults. Lisak (1996) studied 1,882 men and asked them about behaviors that are consistent with the legal definition of SA. This investigator found that 7% of the offenders have committed 66% of all violent crimes and 75% of all rapes. Additionally, the researcher revealed that typical predators have committed 12 crimes for every arrest. These findings are consistent with general crime patterns in which a small number of serial offenders are committing a large number of assaults (Loeber, Farrington, & Stouthamer-Loeber-Magda, 1998). Therefore, even a small increase in sexual assailant convictions could significantly decrease the incidence of SA among women as researchers have suggested that a small percentage of men are victimizing a large number of women.

From a public policy perspective, underreporting is a costly obstacle as official estimates of the incidence and prevalence of SA that are used for planning program and policy initiatives are likely underestimated; therefore, individuals and areas that are at high risk for SA are likely failing to receive adequate attention. In addition, the failure to report precludes the arrest of offenders, which limits the degree to which the criminal justice system can serve as a deterrent to SA crimes (Fisher, Daigle, Cullen, & Turner, 2003).

Individual perspective. Untoward consequences for individuals who do not report SA arise from the fact that failing to report limits the opportunity to utilize victim services that are provided on a state and federal levels by both private and public organizations (Koss, Gidycz & Wisniewski, 1987). Victim-assistance services are available to help with medical, mental health, legal, and financial issues. Individuals who report SA are more likely to seek healthcare and sustain better health outcomes following the assault. For example, findings from the National Crime Victimization Survey (NCVS) indicated that 59% of individuals who reported a SA sought medical treatment as compared to only 17% of the individuals who chose not to report the assault (Rennison, 2002)

In light of these findings, it is clear that the underreporting of SA is a significant problem on both societal and individual levels. Given the high rates of recidivism among sexual assailants, it would greatly benefit society to increase the prosecution and conviction rates of these serial offenders who commit the vast majority of the assaults. Of course, the first step in the long and difficult road to obtaining a conviction is to report the crime to law enforcement officials. If the crime is not reported, and the evidence is not collected in a timely fashion, then it is highly unlikely that a criminal case will be able to proceed.

The focus of this study is to address the issue of underreporting SA by generating data to describe regret among individuals who have been sexually assaulted, an issue that has received little attention from researchers. Regret is a powerful negative emotion that has been described as a significant factor affecting decision-making (Janis & Mann, 1977). Researchers have shown that when individuals are trying to make an important decision, an evaluation of the potential for regret is an important consideration (Landman, 1993; Zeelenberg & Pieters, 2007). Indeed, anecdotal evidence from Sexual Assault Nurse Examiners (SANEs) confirms these findings, as

SANEs have reported that when treating individuals who are struggling with the decision of whether or not to report the SA to the police, the individuals often comment that making the decision about whether or not to report SA is a matter of figuring out whether they will or will not regret the decision to do so. The study of regret within the context of health care-related decisions is in its infancy (Brehaut et al., 2003) and researchers can inform nurses and members of other disciplines who care for individuals who have experienced SA.

Purpose of the Study

The overall purpose of the study was to describe the experience of regret with regard to reporting SA to the police, among individuals who have experienced SA during the past 5 years. The effects of selected independent variables (demographic factors, assault characteristics, and adverse health outcome measures) in explaining variations on levels of regret are described. Also, explications of relationships among selected variables are presented.

While there have been many researchers who have identified barriers and facilitators to reporting SA to the police, there are few researchers who have examined how this decision has affected the lives of these individuals and more specifically, whether or not they regret reporting the SA to the police. One notable exception is the study by Fry and Barker (2001) who found that among women who experienced SA, regrets for inaction on disclosure and taking legal action far exceeded those of action. Additionally, it is clear from the findings of the National Violence Against Women Study (NVAWS) (Tjaden & Thoennes, 2006) that many women who have chosen not to report the assault to the police have indicated uncertainty or an unwillingness to discuss their experiences related to this decision. When women were asked why they chose not to report a SA to the police, 21.9% of the women said that they did not know why they chose not to report, or they refused to answer the question. This finding suggests that a significant

number of women are likely to be experiencing either ambivalence or an unwillingness to discuss post-decisional regret about not reporting SA to the police. The purpose of this study was to address this gap in the literature by studying this issue, using an anonymous, confidential, electronic format, to elicit women's experiences to describe how selected variables (demographics, assault characteristics, and health outcome measures) explain variations in levels of regret.

Definitions

Sexual Assault. Acknowledging the lack of consensus about how to describe SA, the following definition of "sexual violence" that is proffered by the US Department of Justice (1997) will be used in this study: "[Sexual violence is defined as] a wide range of victimization. These crimes include attacks or attempted attacks generally involving unwanted sexual contact between the victim and offender. Sexual assaults may or may not involve force and include physical actions such as grabbing or fondling" (p. 149). The Sexual Experiences Survey-Short Form Victimization (SES-SFV) (Koss et al., 2007), which is the questionnaire used to measure the participants' experiences of SA, categorizes the assaults on a continuum and classifies SA in the following manner: rape, sexual coercion, attempted rape, and sexual contact.

Decisional Conflict. In this study, the definition of decisional conflict is compatible with the definition used in the development of the Ottawa Decision Support Framework (ODSF), which is the underpinning theoretical framework (O'Connor & Jacobsen, 2006). Decisional conflict has been defined as a "State of uncertainty about course of action to taken when choice among competing actions involves risk, loss, or challenge to personal life values" (Gordon, 1997, p. 305). The defining feature of decisional conflict is verbalized uncertainty, but a comprehensive definition must also include the notion that decisional conflict refers to "the

simultaneous opposing tendencies within the individual to accept and reject a course of action" (Janis & Mann, 1977, p. 46).

Additionally, the following characteristics may be exhibited, but the frequency can vary depending upon the individual, decision subject, and time frame: (a) verbalizing uncertainty about choice; (b) expressing concern about undesired outcomes; (c) wavering between choices; (d) delaying the decision; (e) questioning personal values; (f) reporting preoccupation with decision; and (g) demonstrating signs and symptoms of distress or tension (O'Connor & Jacobsen, 2006).

Regret. Regret, the dependent variable in this study, is defined as a negative emotion that is triggered by thinking about a past decision. It is important to note that post decisional regret differs from the broader term of "regret" that does not necessarily refer to regret regarding a decision (e.g., "regret" can be used to denote sorrow that someone has died). Also of note is the fact that post–decisional regret differs from anticipatory regret, which refers to the process of counterfactual thinking, a process that occurs before a decision is made and involves an assessment of potential regret (e.g., "Will I regret reporting this SA?"). Hence, regret describes negative responses related to a decision that was made, as opposed to regret about a particular outcome that results from the decision (Diefenbach & Mohamed, 2007). The Decision Regret Scale (O'Connor, 1996) was used to measure regret in this study.

Independent Variables

The independent variables (demographic variables, assault characteristics, and adverse health outcome measures) were selected based on review of the literature, expert panel advice, and the principal investigator's clinical experience. *Demographic variables* include current age; age at time of assault; race; levels of education; occupational status; and annual income. *Assault*

characteristics include nine variables: assault disclosure; police report; criminal case status (i.e., apprehension, arrest, conviction, and prosecution of assailant); relationship to the assailant; injuries sustained by the participants; and threats made by the assailant. *Adverse health outcomes* include the following: unplanned pregnancy; STIs; anxiety; suicidality; body weight changes; depressive symptoms; PTSD symptomatology; alcohol, drug, and medication usage.

Assumptions

The principal investigator made the following assumptions:

1. Participants will be able to understand the directions and questions posed by the survey.

2. Participants will answer the survey questions honestly and accurately.

3. Reliable and valid instruments will be used to measure regret, sexual experiences, depression, PTSD, and alcoholism.

4. The decision to report or not report SA to the police tends to be a difficult one and many people experience decisional conflict, which is related to the uncertainty regarding the outcomes that will result from the choice.

5. Regret emerges as an important factor that influences the decision regarding whether or not to report SA to the police.

Research Question

The following research question was addressed in this study: To what extent, and in what manner, do selected variables describe variations in levels of regret with regard to making the decision to report SA to the police?

CHAPTER 2

Theoretical Framework and Review of the Literature

Theoretical Framework

The Ottawa Decision Support Framework (ODSF) (O'Connor, 1996) is the theoretical framework that formed the underpinning for this dissertation. The ODSF is an evidenced-based, practical, mid-range theory for guiding patients making health or social decisions (see Figure 1). The ODSF was designed to aid in the development of interventions that strive to prepare patients and clinicians for shared decision-making (Legare et al., 2006). Based on general psychology (Kahneman & Tversky, 1982), social psychology (Ajzen & Fishbein, 1980), decision analysis (Keeney & Raiffa, 1976), decisional conflict (Janis & Mann, 1977), social support theories (Norbeck, 1988; Orem, 1995), and economic concepts of expectations and values (Feather, 1982), the ODSF can be used to understand healthcare decisions that are (a) stimulated by a new circumstance, (b) require careful deliberation because of the uncertain and/or value-sensitive nature of the benefits and risks, and (c) need relatively more effort during the deliberation phase than the implementation phase (O'Connor, Jacobsen, & Stacey, 2002).

The ODSF is based on the premise that decisional conflict is a key element in the decision-making process. Decisional conflict is presented as a state of uncertainty about a healthcare decision in which the choice among competing options involves risk, loss, a challenge to one's personal values, and regret (Legare et al., 2006). The purpose of the framework is to help patients and clinicians identify decisional conflict and use this information to enhance shared decision-making. The framework applies to all participants involved in decision-making, including individuals, couples, families, groups, and clinicians. Central to this research are the

three components of the ODSF (decisional needs, decisional support, and decisional quality), which are described in detail below (O'Connor & Jacobsen, 2006).

Decisional Needs

According to the ODSF, decisional needs include the following factors, some of which are modifiable, while others are inherently difficult: (a) the uncertainty associated with decisional conflict; (b) knowledge and expectations regarding the choices; (c) values associated with the expected outcomes of the choices; (d) support and resources; (e) the type, timing, stage, and leaning of the decision, and (f) personal and clinical characteristics (O'Connor & Jacobsen, 2006). Based on the principal investigator's clinical experiences and literature addressing the needs of individuals who have been sexually assaulted (Amar & Burgess, 2009), an assumption has been made that these factors are likely to be relevant needs among individuals who are deciding whether or not to report a SA. Additionally, the theory posits that unresolved decisional needs will adversely affect decisional quality, which is the second component of the framework.

Decisional Quality

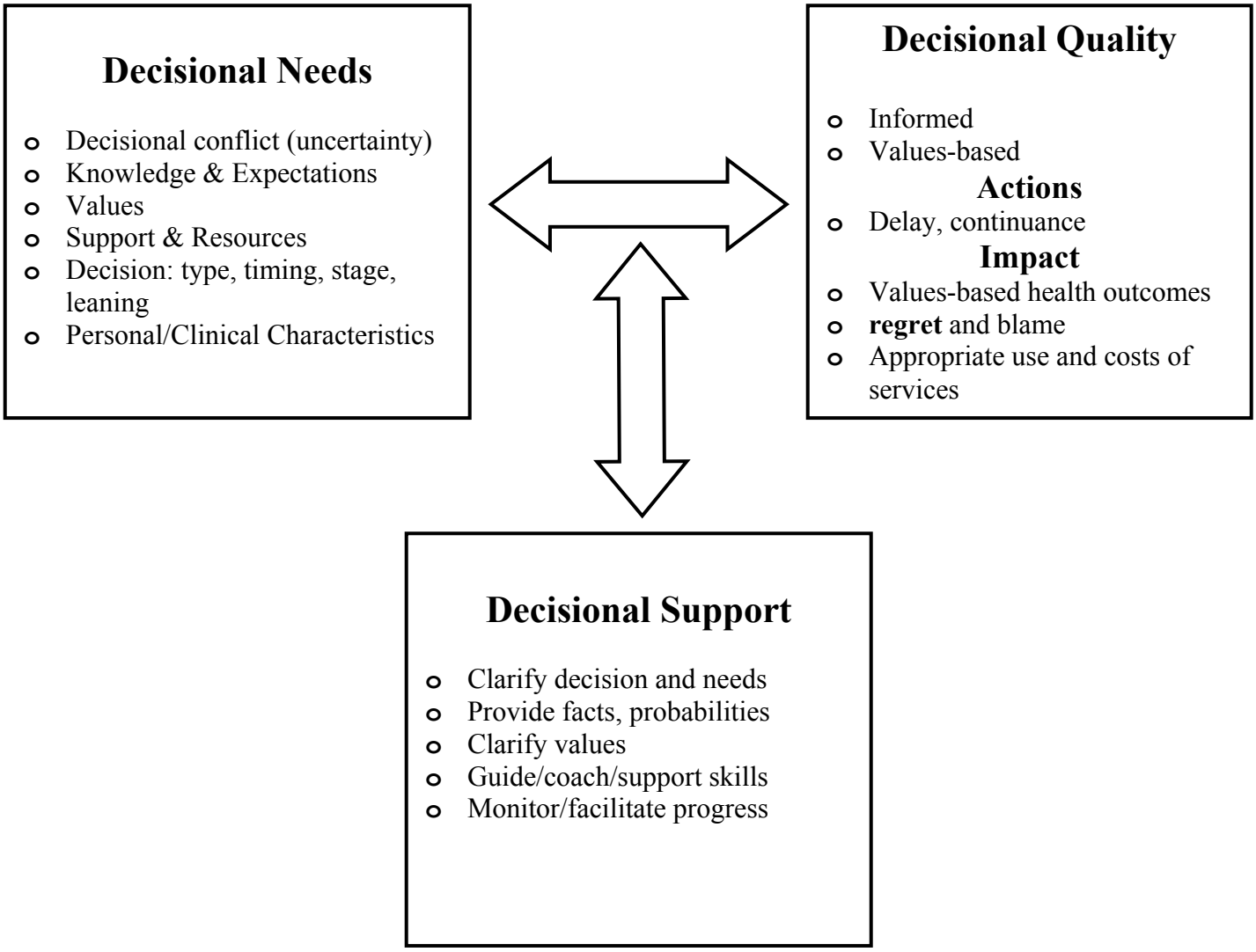
The ODSF posits that decisional quality is assessed according to the degree to which the decision is informed and based on one's personal values (or those of the group). Further, the framework asserts that decisional quality will affect behavior and actions (e.g., delaying a decision) that will affect health outcomes. Examples of such outcomes include the appropriate use and costs of services and the arousal of negative emotions, such as blame and regret (O'Connor & Jacobsen, 2006). Hence, the ODSF supports the notion that decisional quality is related to the experience of regret and describing regret is important because it is an indicator of decisional quality. Since the focus of this study was the experience of regret over the decision to report SA, this component of the framework is the most relevant to the research question as it

provides theoretical support for the study of the relationship of regret to the selected independent variables, which include demographic variables, assault characteristics, and adverse health outcome measures.

Decisional Support

According to the ODSF, decisional quality can be improved by addressing unresolved decisional needs with clinical counseling, coaching, and decision aids. Specifically, support can involve clarifying decisional and personal needs and values; providing empirical data, such as facts and probabilities; guiding, coaching, and supporting in communication and choice deliberation; and monitoring and facilitating progress (O'Connor & Jacobsen, 2006). This component of the framework can be useful in translating the findings from this study into practices that can be used by SANE nurses and others to help individuals as they struggle with the often difficult decision of whether or not to file a police report through the development of strategies and tools (e.g., decision aids) that provide decisional support.

Figure 1. The Ottawa Decision Support Framework.



Review of the Literature

The review of the literature is divided into two parts. The first is a synthesis of the findings related to the independent variables that were selected for the study, which include demographic variables, assault characteristics, and adverse health outcome measures. Second, a synthesis of the theoretical and research findings will be presented that address the concept of regret, including relevant findings from investigators exploring regret and healthcare decision-making.

Independent Variables

Demographic information. Age, education, and income have been found to be positively related to SA police reporting. That is, women who are older, are more educated, and those earning higher incomes are more likely to report (Gartner & Macmillan, 1995; Pino & Meier, 1999; Lizotte, 1985). Researchers have also suggested that young women are at high risk for SA. Based on a sample of 6,159 college students from 32 colleges and universities, Koss, Gidycz, and Wisniewski (1987) reported that 64% of the women had experienced some form of SA since the age of 14 years. The variables race and ethnicity have yielded conflicting findings about the tendency to report. While some researchers have found that African American women are more likely to file a SA police report than Caucasian women (Bachman, 1998; Kalof & Wade, 1996), others have found that Caucasian women are more likely to do so (Feldman-Summers & Norris, 1984). Feldman-Summers and Ashworth (1981) and Crenshaw (1993) argued that minority women are less likely to report SA than women who are not minorities because of distrust of the law enforcement system that includes a fear that they will not be believed, and a concern that nothing will be done to apprehend the assailant. This argument is supported by findings from Thompson, Sitterle, Clay, and Kingree (2007). In a study of 492 college women, they reported

that non-white women who were sexually assaulted were significantly more likely than white women to state that they did not report the SA because they thought it would be viewed as their fault and because they wanted to avoid involvement with the police. Given the conflicted findings about the relationship of race and the reporting of SA, this was an important variable to include in this investigation.

Ruback, Menard, Outlaw, and Shaffer (1999) found that among college students there is a general belief that crimes against intoxicated students, especially involving individuals who have not reached the legal drinking age, should not be reported to the police. Given that students who partake in alcohol and illicit substance use are at a higher risk for criminal victimization behavior (Fisher, Sloan, Cullen, & Lu, 1998), it is logical to conclude that many crimes on college campuses go unreported because of the roles played by contextual factors such as alcohol and drugs (Fisher, Daigle, Cullen, & Turner, 2003). Additionally, the researchers have found that college women who are raped by intimates and acquaintances are less likely to report the SA to the police than their counterparts who are raped by strangers. This observation is significant in light of findings from the National College Women Sexual Victimization Survey Study (NCWSV), which indicated that among college women, nine out of ten of the offenders were known to the women (Fisher, Daigle, Cullen, & Turner, 2000).

Assault characteristics. According to findings from the NVAWS (Tjaden & Thoennes, 2006), the following are reasons for not reporting a rape: fear of retaliation from the assailant (22.1%); shame and embarrassment about the assault (18.1%); the rape was a minor incident or not a police matter (17.7%); police could not do anything (12.6%); police would not believe me or blame me (11.9%); perpetrator was a husband, family member, or friend (8.6%); handled it

myself (7.7%); too young to understand (4.4%); did not want police or court involved (3.5%); one-time incident, last incident (2.9%); and reported to someone else (1.5%) (p. 35).

Barriers to reporting SA have also been identified according to factors related to the victim and the incident, including the victim-offender relationships, extent of physical injury sustained, contextual characteristics, and rape myths (Fisher, Daigle, Cullen, & Turner, 2003). The effect of the relationship between victim and offenders and rates of police reporting is well documented. The extant research supports a view that victims are less likely to report an assault to the police if they know the offender as compared to when the assailant is a stranger (Gartner & Macmillan, 1995; Pino & Meier, 1999; Skogan, 1976; Williams, 1984). In addition, it is important to note that people who are known to the victim commit approximately 74% of sexual assaults; therefore, the majority of SA incidents are unlikely to be reported to the police (Fisher, Daigle, Cullen, & Turner, 2003; Rennison, 1999).

Investigators have suggested that victims are more likely to report when they perceive their assault to be a serious one (Greenberg & Ruback, 1992). Researchers have shown that assaults involving the highest degree of injury are more likely to be reported to the police (Bachman, 1998; Felson, Messner, & Hoskin, 1999; Finkelhor & Ormrod, 1999; Gartner & Macmillan, 1995; Hanson, Resnick, Saunders, Kilpatrick, & Best, 1999; Pino & Meier, 1999; Williams, 1984). Other factors that categorize an incident as more serious include the presence of weapons, threats or use of force, completion of a rape, and monetary losses (Gartner & Macmillan, 1995; Orcutt & Faison, 1988). The findings about the victim-offender relationship and the extent of injuries are particularly problematic when one considers that only 27% of rapes and sexual assaults are committed by nonstrangers, and most of the female victims who reported

a physical injury sustained relatively minor injuries such as scratches, bruises, and welts (Tjaden & Thoennes, 2006).

Tomlinson (1999) observed that the majority of factors that negatively influence police reporting "stem directly from rape myths that are deeply embedded in our general culture" (p. 86). Sexual victimization researchers have described the "classic" or "blitz" rape scenario, which depicts a situation in which there is a confluence of contextual factors that is likely to increase the probability that a victim will choose to report a SA to the police. The classic rape has been typified as an assault in which the victim does not know the assailant, the assault takes place in a deserted and unfamiliar place, and the victim sustains obvious physical injury (Weis & Borges, 1973; Williams, 1984). Frequently, the media reinforces this image in movies in which the protagonist is a young, attractive, unsuspecting white woman who is grabbed at knifepoint and attacked in a dark, secluded parking lot or elevator. According to this myth, "The victim is portrayed as a morally upright, white woman who is physically injured while resisting" (Du Mont, Miller, & Myhr, 2003, p. 469).

According to the stereotype, a "real" or "legitimate" rape scenario involves highly codified and mutually reinforcing notions of what is "genuine" and who can be a "real victim" (Estrich, 1987; Williams, 1984). Du Mont, Miller, and Myhr (2003) suggested that regardless of the context and details of the assault, "traditional notions of chastity and respectability have been seen as effectively disqualifying the 'experienced' and the 'misbehaved' from claiming or achieving real victim status" (p. 469). Because of this disqualification criterion, the following individuals are not eligible for victim status: lesbians, sex trade workers, people with psychiatric illnesses, low-income women, hitchhikers, and those who frequent nightclubs and/or who have been drinking.

It is clear that there is a strong, positive relationship between seeking medical care and reporting SA. Data from the National Women's Study (NWS) (Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993) indicated that 19% (approximately one-fifth) of adult rape victims report SA to the police, and 71% of these individuals receive medical care (Resnick et al., 2000). Similarly, findings from the National Crime Victimization Survey (NCVS) (Rennison, 2002) indicated that among the individuals who were raped, 59% who reported the assault to police were treated for their injuries, compared to 17% of the sample with unreported victimizations.

Adverse healthcare outcomes. Adverse healthcare outcomes associated with the experience of SA have been well documented (Briere & Jordan, 2004) and refer to a wide variety of experiences and conditions including the following: unplanned pregnancy (Coker, 2007), sexually transmitted infections (STIs) (Tubman, Montgomery, Gil, & Wagner, 2004), anxiety (Gleason, 1993; Kemp, Green, Hovanitz, & Rawlings, 1995), suicidality (Golding, 1999; Thompson, Kaslow, & Kingree, 2002; Ullman & Brecklin, 2002), depression (Campbell, Sullivan, & Davidson, 1995; Gleason, 1993; Orava, McLeod, & Sharpe, 1996; Plichta & Weisman, 1995), PTSD (Astin, Lawrence, & Foy, 1993; Kilpatrick, Acierno, Resnick, Saunders, & Best, 1997; Kilpatrick, & Resnick, 1993), eating disturbances (Wonderlich, et al., 2001); and substance use (Epstein, Saunders, Kilpatrick, & Resnick, 1998; Kilpatrick, Acierno, Saunders, Resnick, & Best, 2000). Additionally, the deleterious effects of SA on the health of women are associated with self-reports of poorer overall physical health as compared to women who have not experienced SA (Campbell et al., 2002; Golding, 1999a; Koss, Koss, & Woodruff, 1991).

An examination of adverse healthcare outcomes as they relate to regret and the decision-making process is critical in light of findings from Koss, Gidycz, and Wisniewski (1987) who found that more than 70% of the college-aged women who indicated that they experienced

forced, unwanted sex also indicated that they did not believe that they had been raped. Therefore, it is not sufficient to study this topic in a more direct way. Further, the researchers found that women who do not acknowledge being assaulted are far less likely to disclose the incident and seek postassault services. One of the goals of this study is to describe the relationship between adverse healthcare outcome measures and levels of regret about the decision to report in order to reach a better understanding of how these variables relate to one another. This knowledge will inform the complex process of decision-making among individuals who have been sexually assaulted.

Regret

Beginning in the 1980s, researchers began to study regret as a critical component of formal decision theory (Bell, 1982). Influenced by deontological and utilitarian philosophy, classical decision-making theory maintains that humans make decisions based on a desire to maximize optimal outcomes (e.g., profit, pleasure, safety, etc.) (Landman, 1987). Modern theorists have recognized the critical role of regret in the decision-making process and these theories assert that, "Choice depends not only on the probability and the value of the chosen outcome but also on the amount of regret for alternatives not chosen" (p. 135). Recognizing that regret is likely to influence the decision-making process of individuals who have been sexually assaulted, a synthesis of the theoretical literature that draws from a variety of academic fields follows. There is a paucity of research on regret and police reporting among individuals who have experienced violence and abuse. One related study was conducted by Barker and Fry (2001) who found that women who experienced violence were more likely to have regret for *not* contacting the police as opposed to contacting the police (e.g., inaction vs. action). Additionally,

the research literature that addresses the concept of regret within the context of the healthcare decision-making process will be presented.

Definitions of regret. According to the *Webster's Third New International Dictionary* (Gove, 2002, p. 1913) regret is derived from the French word "regreter" which means "to weep." The dictionary provides *three* slightly different meanings of the term. The *first* definition concerns the loss of something desirable: "to remember with sorrow or grief; mourn the loss or the death of; miss poignantly." The *second* definition features undesirable events as the targets of regret: "to have dissatisfaction, misgivings, or distress of mind concerning; to be keenly sorry for one's mistakes." The *third* definition delineates the circumstances under which regret occurs and the emotions that tend to result: "sorrow caused by circumstances beyond one's control or power to repair; grief or pain tinged with disappointment, dissatisfaction longing, remorse, or comparable emotion."

Additionally, regret has been defined in a manner that vividly captures both the affective (i.e., frustration) and cognitive (i.e., desire to change an action) nature of regret: "[regret is a] special form of frustration in which the event one would change is an action one has either taken or failed to take" (Kahneman & Tversky, 1982, p. 170). Landman (1987) extended the definition of regret in the following way:

> Regret is a more or less painful cognitive/affective state of feeling sorry for losses, transgressions, shortcomings [sic], or mistakes. The regretted matters may have been sins of commission as well as sins of omission; they may range from entirely voluntary to the accidental; they may have been actually executed deeds or entirely mental ones; they may have been committed by oneself or by another person or group; they may be moral or

> legal transgressions or morally and legally neutral; and the regretted matters may have occurred in the past, the present, or the future. (p. 153)

It has been argued that one of the reasons regret is such a complex concept is that both cognitive and affective processes influence regret, which are often described respectively as "cold" and "hot" components (Landman, 1993). Indeed, the coolness of cognitive assessments and the heat of emotional reactivity can be likened to the "ancient quarrels" of the philosophers and the poets (Nussbaum, 1990, p. 6), which were eloquently contrasted by Yeats as representing the "logical straightness" versus "the crooked road of life" (Landman, 1993, p. xix).

Regret in the economic and management literature. Economists were among the first to study regret as it related to consumer decision-making. Modern utilitarian economic theorists define ethical rationality as the process of making choices as to maximize the good. Economist David Bell (1982) defined regret as "the difference in value between the assets actually received and the highest levels of assets produced by other alternatives" (p. 963). Landman (1993) elaborated on this notion and stated, "Modern utilitarianism [i.e., roughly synonymous with "classic decision theory"] demands that decisions be based entirely on calculations of *expected consequences,* as opposed to being based on tradition, dogma, rules, obligation, personal responsibility, intentions, or some other principle" (p. 117).

Expanding this idea, economists have developed a simplistic and commonsensical rule that has come to be known as "The Expected Utility Theory (EUT)" (Friedman & Savage, 1952; Mongin, 1998). EUT posits that individuals make decisions based on choices between risky or uncertain prospects by comparing their expected or subjective utility values (*EV*) (i.e., what I value most, and the weighted sums of the utility values assigned to outcomes (*X),* multiplied by

their subjective expected probabilities (*p* of *X*) (i.e., the likelihood of getting what I want). Simply stated, EUT suggests that individuals identify possible outcomes, and to each one they attribute a probability associated with a particular outcome. The EUT equation is as follows (Landman, 1993, p. 118): The expected value of outcome *X* equals the probability of *X* multiplied by the value of *X.*

EUT raises important questions for economists and decision theorists. One question has to do with "preference uncertainty" that refers to the problems associated with ambivalence and uncertainty over the identification and quantification of the value of the utility numbers (Fischer, Jia, & Luce, 2000). That is, how can one be sure that the "proper" values have been assigned and that they have been weighted properly? Another concern is that there may be factors influencing the decision that are not captured by the utility and outcome values (e.g., safety concerns related to potential retribution from the assailant or emotional paralysis associated with Rape Trauma Syndrome [Burgess & Holmstrom, 1974]). In other words, EUT fails to recognize the potential impact of confounding variables that may result from theoretical, experiential, and other contextual factors (Mongin, 1998).

Moving beyond the abstract principles of EUT, consumer researchers have studied consumer behaviors that have been helpful in explaining relevant societal problems and the role of regret. For example, poor financial decisions can result in a failure to save enough money for retirement; the development of ballooning credit card debt; deleterious consumption behavior (e.g., compulsive gambling, smoking); obesity (e.g., over consumption); and excessive consumption (e.g., materialism). Indeed, researchers have shown that in relation to all of these negative financial situations, consumers express regret about their purchases or consumption. Since this is so, studying the concept and process of regret might lead to the development of

useful insight and interventions to help people avoid poor financial decisions and behaviors, and thereby attenuate dramatic societal ailments (Inman, 2007).

Consumer behaviorists are hopeful that by studying regret regulatory mechanisms, such as anticipatory regret (i.e., predicting that which one might regret before taking the action/making the purchase), they can identify techniques that will enhance one's ability to effectively decrease regret by making less regrettable choices. For example, in thinking about the consumer who is spending beyond his or her needs, perhaps that individual could learn to recognize the potential for buyer's regret that might result from an impulsive purchase. Likewise, findings from this study suggesting that victims tend to regret or not regret reporting the crime of SA in a timely manner could have implications for the care of individuals who have been sexually assaulted.

While economists are among the first to study the concept of regret in an attempt to understand consumer behavior, researchers have shown that individuals' greatest regrets tend not to concern economic issues. Instead, significant regrets are likely to stem from personal improvement decisions involving education (32%) and career (22%) and from personal relationships, like romance (15%) and parenting (10%) (Roese & Summerville, 2005). Acknowledging the early and significant contributions from economists, let us move along and explore contributions from the "warmer" climates of the philosophers and psychologists.

Regret in the philosophy and psychology literature. The Socratic principle, which is reflected in the following statements, has guided ethical thinking and notions of decision-making since antiquity: "To know better is to do better"; "The perceived better attracts more than the perceived worse"; and "No one voluntarily does what he or she perceives to be the worse" (Landman, 1993, p. 111). Landman commented that if we do not always choose the best thing to

do, then we "violate the Socratic principle not only when it comes to the moral or 'right thing to do' but also when it comes to the pragmatic and purely self-interested matter of choosing what will satisfy us most" (p. 112). Thus, the existence of regret challenges and undermines the Socratic principle. In other words, if in fact human beings acted according to the principles, then regret would not exist because according to Socratic principle, we always choose to do what is in our best, perceived interest.

Plato and Aristotle advanced the philosophical perspectives on human reason by recognizing nonrational factors as well. In Book IV of *The Republic,* Plato (1952) describes the soul, as consisting of three elements: (a) the rational element, which he referred to as reason; (b) the passionate element (i.e., *emotions*), such as love and hatred; and (c) the *appetitive*, or concupiscent element that controls one's desires for things such as sex, food, and money. Stressing that "reason ought to rule" (p. 354), Plato placed less importance on the role of emotions and appetite, but nonetheless, moved beyond the thinking of Socrates by acknowledging the significance of affect and desires. Similarly, Aristotle believed that the soul was divided into rational and irrational parts, but also maintained that rationality reigned supreme, as he asserted that the irrational principle ought be "amenable and obedient" to the rational principle (Landman, 1987). Indeed, rationality, which typically denotes the degree to which a person's values and beliefs are realistic, is a seminal construct in regret theory (Landman, 1993). According to Jungermann (1986, p. 342), there are three types of rationality that can be distinguished from another as follows: (a) *Substantive rationality,* which is mostly closely aligned with the everyday usage of the term as it reflects the degree to which a person's rational abilities are grounded in reality; (b) *procedural rationality,* which refers to the extent to which individuals embark on an unbiased search for information to be used in the decision-

making process; and (c) *formal rationality,* which describes the logical coherence and internal consistency of the judgments.

While philosophical perspectives on rationality and related concepts have contributed greatly to the study of regret, it is within the field of psychology that the greatest conceptual contributions have been made. As you can see, Jungermann's typology of rationality helps us to examine the constructs of rationality within the context of a situation in which regret and decision-making are being examined.

In responding to the views of Socrates and others, who regard regret as irrational, Landman (1993) explained that there is not "necessarily a psychological contradiction between doing X, judging that X is the best thing to do, and judging that X is regrettable. Although this represents technically a case of formal irrationality, it is not a case of psychological incoherence" (p. 116). Rather than characterizing this activity as "irrational," Landman preferred to regard it as "a common instance of psychic conflict, rationally grounded in the very real complexity of the world and in the distinction between action-guiding and non-action-guiding judgment" (p. 116). She said, "Regret lodges itself in the spaces between act and character, act and judgment, and action-guiding and non-action-guiding judgment" (p. 116).

Kahneman and Miller (1986) coined the phrase "counterfactual thinking" that refers to the "power of backward thinking." Counterfactual thinking is the process of thinking about possible, but unactualized situations. As such, it is an inductive process that commences with a set of particular givens and proceeds to the conception of a broader range of possibilities. The research psychologists explained that counterfactual thinking is a necessary component in the process that leads to the experience of regret. As we consider the options that we rejected, albeit perhaps unconsciously or without much thought, we develop regretful thoughts and feelings. In

other words, if there were no other option with which to compare our chosen action, including the option of inaction, then there would be no alternative, or counteraction, to regret. Kahneman and Miller (1986) referred to this counterfactual thinking activity as a "simulation heuristic," (i.e., "running mental stimulations") (p.206), which is defined as a cognitive process of creating and evaluating alternatives to actual life outcomes and situations, to assess causation and other relevant factors, such as antecedents and consequences.

According to Janis and Mann (1977), anticipatory regret functions as a hot cognitive process that has the ability to motivate the decision maker to construct a comprehensive balance sheet. The authors maintained, "We must tolerate the painfulness of predecisional conflict during the various stages of the decision-making process if we are to engage in reality testing rather than wishful thinking" (p. 222). Thus, recognizing or cultivating anticipatory regret is a significant contribution to regret theory and the concept might be informative in designing interventions (e.g., decision aids, heuristics) to help people make better decisions, or feel better about the decisions that they have made.

The cornerstone of Freud's (1930) theory of the psyche is the notion that "in mental life nothing [e.g., a negative emotion such as regret] which has once been formed can perish" (p. 16). In other words, Freud asserted that mental processes are never eradicated through defensive strategies such as repression or demonstrating socially approved modes of expression. Therefore, Freud determined that one of the goals of psychoanalysis is to recreate experiences of regret so that the experiences can be understood and synthesized as individuals develop a better understanding of themselves. Landman (1993) wrote, "Insofar as new understanding reveals ways of undoing, redoing, or repairing past missteps, regret becomes no more irrevocable or irremediable than the past" (p. 18).

In the recent psychiatric literature, there has been interest in the moral emotions, which include guilt, shame remorse, and regret. Kroll and Egan (2004) defined moral emotions as "those emotions that arise in the context of events [i.e., everyday life] that are perceived to have a moral component or that serve to motivate an agent toward actions (or inactions) that carry a moral component" (p. 352). These emotions are also commonly referred to as "emotions of self-consciousness" or "emotions of self-assessment" because a degree of self-reflection regarding a person's role in the event is necessary to experience a moral emotion such as regret. The authors explained that psychiatry has been interested in the study of moral emotions not for their role in symptom etiology in mental illness (e.g., excessive guilt associated with depression); rather, the attention is focused on their role in everyday life and how they exert influence in defining our judgments, character, and our humanity. It is important to note that guilt, shame, remorse, and regret represent a cluster of *negative* moral emotions that have been identified. *Positive* moral emotions, which are also the subject of psychiatric study, have also been acknowledged and include awe, gratitude, love, and compassion (Taylor, 1985).

Landman (1993) observed that since regret requires, and likely encourages, self-reflection, the "emotional sentiment" serves us both intrinsically (i.e., self-reflection) as well as instrumentally for beneficial purposes, as it guides individuals towards reconstruction and integrity. She argued that self-reflection and "finding oneself" is an active, dynamic, and dialectical (i.e., back-and forth) as opposed to a cyclical process. As such, there is not a complete and formed self to be sought or discovered. Rather, the self is created through a historical and linear, dialectical process. Crediting an anonymous graduate student, Landman remarked, "Self is a verb." She also stated, "Part of the mystery of selfhood lies in its lack of inevitability; it is a task, not a given" (p. 25). Examining the experiences of individuals who have been sexually

assaulted, it might be useful to consider that which they might regret today they may not regret tomorrow. Likewise, the degree of regret that one experiences may vary depending on temporal, historical and other contextual factors. These theoretical notions also suggest that regret is a personal and dynamic process and so prescriptive, rigid theories that suggest the application of broad generalizations when describing the experience of regret (e.g., economic models and classical decision theory) may have only limited applicability.

Regret in the neurobiology literature. Neurobiologists have theorized that that the orbitofrontal region in the cortex of the brain, which is known to be active in the tasks of reward evaluation and comparison, plays a fundamental role in mediating the experience of regret (Camille et al., 2004). Recognizing that decision-making is influenced not only by the value that we expect to gain in making a particular choice, but also by how we hope to feel after making the decision, regret theorists maintain that the emotional component of the decision may be the reason why we choose to ignore what would have happened if we had made an alternate choice (Kahneman & Miller, 1986). Indeed, it is commonly held that this cognitive process of counterfactual thinking mediates emotions of regret (Byrne, 2002). Since regret tends to be a highly unpleasant experience, individuals attempt to avoid this negative emotion. As previously discussed, regret is associated with self-reflection and the acceptance of responsibility; therefore, it is a powerful independent of behavior as people often make decisions in an attempt to avoid developing regret (Mellers, Schwartz, & Ritov, 1999; Camille et al., 2004).

To extend the evaluation of the role of the orbitofrontal context and the experience of regret, Camille at al. (2004) designed a study that involved manipulating a simple gambling task in order to characterize a subject's decision-making in terms of the anticipated and actual emotional impact (i.e., disappointment and regret). The sample consisted of two groups of

subjects: those who did not have orbitofrontal cortex lesions ("normal subjects"), and those who had sustained lesions in the orbitofrontal cortical regions of their brain ("orbitofrontal patients"). Both groups were presented with a choice between two risky gambling options that carried the potential for a high monetary reward (200 French francs). The following predictions were tested:

> (a) The same obtained outcome will lead to different experienced emotions depending on whether feedback [i.e., verbal information about choice that was not selected, which can be negative or positive depending upon whether it represented a loss or gain associated with the option chosen or not chosen] about the outcome of the unchosen option is available; (b) as compared with the emotions of normal subjects, the emotions of patients with orbitofrontal lesions will not show an effect of feedback about the outcome of the unchosen option; and (c) choice strategy will develop as a result of the ability to take into account the outcome of the unchosen option in normal subjects but not in orbitofrontal patients (pp. 1167-1168).

Findings of the study support the theory that the orbitofrontal cortex region plays a role in regret. The researchers found that normal control subjects ended up with greater net gains more often because they tended to choose the more advantageous gambling moves. The researchers attributed this difference to the ability of the control subjects to anticipate their emotional responses and avoid negative emotions (i.e., disappointment and regret). The normal subjects ended up with mean earnings of 367 francs, while the orbitofrontal patients ended up with mean net losses of -110 francs. The differences in the earnings between the groups were statistically significant (Mann-Whitney U test, $Z = 2.5$, $p = 0.01$) (Camille et al., 2004).

Additionally, the researchers found that within the control group, the emotions experienced because of making a gain or loss were not independent from the effect of the

evaluation of alternative outcomes. In other words, control subjects were likely to report greater happiness about their gain if they knew that the alternative choice yielded a lesser gain, or even better, a loss. So, if someone won 50 francs and found out that the other choice yielded a loss of 100 francs, that person would be happier with his/her gambling choice than if the individual won 50 francs but discovered that the alternative options resulted in a gain of 100 francs. In the orbitofrontal patients, regret related to knowledge of the alternative choices (either favorable or unfavorable) did not occur. The authors reported, "The absence of regret in orbitofrontal patients suggests that those patients fail to grasp this concept of liability for one's own decision that colors the emotion experienced by normal subjects" (p. 1169).

Finally, the researchers also found that among normal subjects, regret generates higher physiological responses and it is consistently reported as being a more intense experience than that of disappointment. The fact that this difference was not present in orbitofrontal patients demonstrates that distinct neural processes generate emotions of disappointment and regret. Further, the researcher provided evidence about the specificity of the orbitofrontal region and the mediation of regret as three control subjects who had lesions in other parts of the frontal lobes demonstrated normal regret levels and choice behavior while performing the gambling task (Camille et al., 2004). Moving away from the economic and psychological frameworks and studying the experience of regret from a neurobiological perspective represents a paradigmatic shift in perspective and it provides unique and critical information regarding the elusive concept of regret.

A synthesis of the regret literature makes it clear that regret is a complex negative emotion that involves both cognitive and emotional processes. While some philosophers and economic theorists have argued that regret is irrational, as we always act in our best interest,

others maintain that regret tends to be a universal and unavoidable phenomenon. However, neurobiologists have demonstrated that there may be individuals who are exceptions to this rule based on abnormal physical findings, such as lesions in the orbitofrontal cortex of the brain. It is commonly held tenet that people experience regret (or a lack thereof) based on a wide range of individual factors such as developmental age, culture, situational characteristics, experiences, and neural wiring.

Regret and healthcare decision-making. A review of the research studies on regret within the context of making healthcare decisions is useful in the context of this research and is limited to researchers who have used the Decision Regret Scale to measure the complex construct of regret. Relevant findings can be classified according to the following themes: healthcare outcomes and quality of life, satisfaction with decision, decisional conflict, and reversing a decision. Additionally, the ways in which the findings reflect on tenets of the ODSF are explicated in this section.

The ODSF posits that one way to assess decisional quality is to measure the impact of health outcomes through the measurement of quality of life (QOL) indicators. For five of the studies included in this brief synthesis, the researchers used measurement scales such as the Menopausal Quality of Life Questionnaire (MENQUoL); the European Organization for Research and Treatment of Cancer Questionnaire (EORTC QLQ-30); as well as with direct, single-item questions that requested a QOL appraisal (Brehaut et al., 2003; Davison & Goldberg, 2003; Davison, So, & Goldberg, 2007).

Findings from four of five of the studies supported the decisional quality component of the ODSF, as higher levels of regret were found to be associated with reports of lower QOL scores. More specifically, Davison, So, and Goldberg (2007) found that among men who

expressed regret about their decision to undergo treatment for prostate cancer, the highest levels of regret correlated ($p < .01$) with decreases in role and social functioning, increased pain, and financial difficulties. However, regression modeling revealed no significant predictive effect on Decision Regret Scale scores. Additionally, Davison and Goldenberg (2003) reported conflicting findings from a study in which these researchers found no effect of reported QOL on regret among men who made decisions about prostate cancer treatment (PCT). Further research is needed to study these contradictory findings.

Assessment of the quality of the decision is a critical component of the ODSF. A synthesis of the findings from seven studies that have focused on decisional quality, as measured by satisfaction with the healthcare decision and information provided regarding the decision, follows. Overall, the investigators indicated that higher levels of regret were associated with reports of lower satisfaction with the decision (Brehaut et al., 2003; Davison & Goldenberg, 2003). Additionally, researchers studied satisfaction with the decision in terms of the cognitive processes of men who were in the early stages of prostate cancer treatment. Feldman-Stewart, Brundage, Van Manen, and Svenson (2004) found that cognitive differentiation, which involves the application of decision rules and restructuring processes, was negatively correlated with regret. That is, participants who reported the use of cognitive differentiation tended to have less regret. Sheehan, Sherman, Lam, and Boyages (2008) found that among women who reflected on their decision to undergo breast reconstruction following a mastectomy for the treatment of breast cancer, the majority (52.8%) of the participants experienced no regret; 27.6% experienced mild regret; and 19.5% experienced moderate to strong regret regarding the surgical decision.

The ODSF posits that decisional conflict is a key element that influences decisional needs. Decisional conflict is defined as “the state of uncertainty about which course of action to

take when the choice among competing actions involves risk, loss, regret, or a challenge to personal life values" (Legare et al., 2006, p. 478). This definition is supported by findings from three studies, whose investigators found that higher levels of regret were associated with higher levels of decisional conflict. The investigators conducted the studies with three different patient populations including women who had chosen hormone replacement therapy (HRT) for relief of menopausal symptoms, women who were considering breast cancer adjuvant therapy (BCAT) (i.e., reconstructive surgery) following mastectomy, and men considering different options for prostate cancer treatment (PCT) (Brehaut et al., 2003). These findings are congruent with the commonly stated notion in the decisional conflict literature, that regret is correlated with decisional conflict. Theorists have suggested that regret results not only because of a particular outcome, but also based on the availability of other paths of action that might have been chosen—the road less taken, so to speak (Guthrie, 1999; Zeelenberg, 1999).

The topic of the effect of regret and changing a decision is frequently discussed in the regret literature. Findings from a study of women who had made decided to use HRT for menopausal symptomology support the hypothesis that decisions that are reversed result in greater degrees of regret. Patients who, over the course of nine months, changed their minds about using HRT showed significantly greater regret than those women who did not change their decision about choosing HRT (Brehaut et al., 2003).

Summary of the Literature Review

In summary, this synthesis of the study findings on regret and healthcare decisions, which was limited to studies whose investigators used the Decision Regret Scale, found that people who have higher regret are likely to report lower ratings of QOL, lower satisfaction with their decisions, higher decisional conflict, and are more likely to express regret over a decision that

has been reversed. These findings are consistent with the regret research that is found in the psychological and economics literature (Janis & Mann, 1977; Landman, 1993; Zeelenberg & Pieters, 2007). One interesting question raised by the findings has to do with understanding the potential cumulative effect of regret. That is, if past regret effects our future actions, to what extent and in what manner is this done? Similarly, the following question is begged: Does the "regret dose" play an important role? In other words, does mild regret of reversing a decision lead to mild regret? Further, these findings suggest that regret can be studied as a more complex entity characterized as either a mediating or a moderating variable for decisional conflict, or a number of other independent variables.

A significant limitation of the study is that the participants included oncology patients who were reflecting on a decision related to disease treatment. Thus, it is not known if these findings, and the evaluation of the performance of the Decision Regret Scale, can be generalized to other patient populations. Since regret has been shown to be associated with critical outcomes such as evaluations of quality of life and decisional conflict, it is worthwhile to extend the study of regret, and the use of the Decision Regret Scale, to other patient populations. For example, understanding the experience of regret and using the Decision Regret Scale has the potential to benefit clinicians who help victims of SA as they struggle with the decision of whether or not to report the crime to the police.

CHAPTER 3

Methods

This chapter discusses the study aims, research design, study sample, variable measurement, data analysis, and ethical considerations for this study.

Study Aims

The purpose of this study was to describe regret among individuals who have experienced SA focusing on their experiences in making the decision to file a police report. This study investigated the influence of selected factors that have been categorized as demographic information, assault characteristics, and adverse healthcare outcomes.

Study Design

A cross-sectional, ex post facto, descriptive study design that utilized an electronic survey format was used. Participants were given a website address that contained a link leading to the questionnaire. SurveyMonkey software was used to design and administer the self-report, electronic, secure, encrypted survey. The 34-item questionnaire took approximately 20 minutes to complete and is composed of six sections that address the following: demographic and assault characteristics; regret, depression, PTSD, alcohol, and medication and drug use.

Study Sample

Inclusion Criteria

Participants in the study included men and women, between the ages of 18 and 25 years, who had experienced SA during the past five years. I chose the age range of 18 to 25 years because researchers have provided substantial documentation that college students, who tend to fall into this age group, are at high risk for SA and they are unlikely to report a SA to the police

(Fisher, Daigle, Cullen, & Turner, 2003). The participants were required to read English and have computer access, as the survey format is electronic.

The experience of SA during the past five years is part of the inclusionary criteria because it will be useful to describe and compare the experiences of regret from the perspective of those who have been assaulted recently and those who have been assaulted in the previous five years, as Gilovich and Medvec (1995) noted that there is a temporal pattern of regret. Specifically, actions generate more regret in the short term, and inactions produce more regret in the long term.

Sample Size Determination

The study sample size was estimated based on guidelines established by Tabachnick and Fidell (1999), who recommended a minimum of 5-10 times as many cases as there are independent variables in the regression equation. Twenty independent variables are included in the study; therefore, the estimated sample size was a maximum of 200 participants. After 119 participants consented to participate in the study, a preliminary analysis of the data was done to assess the number of variables that would be entered into the regression analysis. A power analysis was performed for a multiple regression analysis that included four independent variables and it indicated that a sample size of 85 was sufficient to detect a moderate effect size of 0.15 assuming a power of 0.8. (Faul, Erdfelder, Lang, & Buchner, 2007). It was determined that a less than moderate effect size was adequate given that this was a descriptive, pilot study.

Recruitment Strategies

Recruitment strategies included the placement of fliers on local college campuses, in university publications, and in locations in the Boston area where potential participants were likely to frequent, such as coffee shops and restaurants. Additionally, recruitment advertisements

were placed on Craigslist, the Boston Area Rape Crisis Center (BARCC) website, and an email invitation was sent to members on listservs that were associated with the campus and the Rape, Abuse and Incest National Network (RAINN).

Protection of Human Subjects

IRB Approval

After receiving approval from the Institutional Review Board (IRB) at Boston College, the principal investigator began data collection. The survey process began when the participant reached the study website and was greeted by a welcome screen providing information about the study purpose and procedures. Each participant was provided with a copy of the “Consent to Participate" in the Survey (see Appendix A). Participants were advised that they could withdraw from the study at any time without consequences. They were informed that while there were no obvious direct benefits from participating in the study, they might derive satisfaction from knowing they have contributed to the research on this topic. After completing the survey, participants were given an opportunity to record any comments about their reactions to participation in the study.

Confidentiality

Respondent confidentiality was maintained by using a data encryption feature that is offered by SurveyMonkey (www.surveymonkey.com), an electronic survey software program that assures the anonymity of study participants and the security of the data. SurveyMonkey uses Secure Sockets Layer (SSL), a protocol that was developed for transmitting private documents or information via the Internet and it complies with the Hospital Insurance Portability and Accountability Act (HIPAA) standards. SSL works through a cryptographic system that secures a connection between a client and the server. The study participants received an encrypted, study

survey link; the survey link and survey pages were encrypted during transmission from the researcher's account to the participants; and the participants' responses were encrypted as they were delivered back to the principal investigator's account. The level of encryption is designated as "Verisign certificate Version 3, 128 bit encryption." (SurveyMonkey, 2008)Respondents' email and Internet Protocol (IP) addresses were not collected.

Risk Management for Study Participants

Due to the sensitive nature of this topic and the potential for distress as participants recalled events related to a past assault, participants were informed about free, confidential, comprehensive support services that are available through the Boston Area Rape Crisis Center (BARCC), the Rape Assault and Incest National Network (RAINN), and an individual psychiatric advanced practice nurse.

BARCC is an activist organization that has been providing services to individuals affected by SA for more than 26 years. In addition to the 24-hour telephone hotline, BARCC provides the following services, which are available in English and Spanish: short-term counseling; support groups; referral networking; personal support and advocacy; public education; in-service training; and agency consultation. Individuals (including friends and relatives of the person who has experienced SA) can utilize BARCC services by contacting the hotline number (1-800-841-8371), which is available 24 hours a day, 7 days a week. In addition, BARCC has a number of clinics throughout Massachusetts and the hotline counselors provide individuals with details about these clinic sites' hours (Massachusetts Department of Public Health, 2007).

RAINN is staffed by more than 1,100 trained counselors and manages the National Sexual Assault Hotline (1-800-HOPE), which offers free services 24 hours a day, seven days a

week. When a caller reaches the hotline, a computer notes the area code and first three digits of the caller's phone number. The call is instantaneously connected to the nearest RAINN member center. If all counselors at that center are busy, the call is sent to the next, closest center. The caller's phone number is not retained, so the call is anonymous and confidential unless the caller chooses to share identifying information. Additionally, individuals can contact RAINN through their website at www.RAINN.org (RAINN, 2009).

Additional resources in the form of counseling and referral were offered to study participants by a licensed, board-certified Psychiatric-Mental Health Clinical Nurse Specialist. Contact information for BARCC, RAINN, and the clinician were provided on the consent form and at the end of the questionnaire. Representatives from these resources have not reported any situations in which a study participant has experienced an adverse event as a result of taking part in this study.

Measurement of Study Variables

A decision was made to include a response choice of "I prefer not to answer" throughout the questionnaire. This option was included with the intention of empowering the participants by providing them with more choice and control (Dickerson, 1998). Including this response choice resulted in a modification of the original versions of the measurement instruments; however, the scoring structure and guidelines were maintained as the "I prefer not to answer" responses did not receive a score and they were coded as "missing data."

Regret

The Decision Regret Scale (DRS) (Brehaut et al., 2003) (see Appendix A) was used to measure regret regarding the decision of whether or not to report SA to the police. A Cronbach's α coefficient of .92 has been reported for the DRS (Brehaut, et al., 2003). The instrument has

shown internal good consistency among a variety of individuals who face healthcare decisions related to cancer treatments (Brehaut et al., 2003), including young women. An assumption has been made that the instrument will demonstrate similarly favorable psychometric properties when used to measure regret among women who have experienced SA because in both situations, the decisions (cancer treatment and police reporting) are likely to be difficult choices that have to be made in a timely manner and while the individuals are experiencing great stress (O'Connor, Jacobsen, & Stacey, 2002). The Cronbach's alpha for the use of the DRS in this study is reported in Chapter 4.

The DRS employs a five-point Likert response format (1=strongly agree; 2=agree; 3=neither agree nor disagree; 4=disagree; 5=strongly disagree). Items two and four were reverse-coded so that, for each item, a higher value indicates more regret. Answers to the five regret items are summed, yielding a single measure of regret. A score of 5 indicates no regret while a score of 25 indicates high regret. For descriptive purposes, the responses to the DRS were categorized according to low (5-11), medium (12-18), and high (19-25) levels of regret.

Sexual Assault Screening

The SES-SFV (Koss et al., 2007) (see Appendix A) is a 10-item, self-report questionnaire that was designed for use among young adults to assess victimization and perpetration of unwanted sexual experiences. Seven of the items are categorized along a severity continuum, ranging from sexual contact to rape (Cecil & Matson, 2006). The SES-SFV is a newly revised version of the SES (Koss & Gidycz, 1985), which has been used widely among college-age women, and has demonstrated high levels of validity and reliability. Cronbach's alpha values above .70 have been consistently reported (Cecil & Matson, 2006; Koss, Figueredo, Bell, Tharan, & Tromp, 1996; Koss & Gidycz, 1985). In addition, the SES repeatedly has

demonstrated stability of responses over time (Cecil & Matson, 2006; Krahe, Reimer, Scheinberger-Olwig, & Fritsche, 1999) and high levels of test-retest reliability. The survey was administered to a group of 138 people on two occasions, one week apart and Koss and Gidycz (1985) reported a mean item agreement between two administrations of the survey of 93%. A moderately high Pearson correlation of .73 ($p < .001$) was observed, based on self-reports of sexual victimization obtained subsequently from the interviewer. Additionally, Testa, Livingston, and VanZile-Tamsen (2005) reported similar rates of disclosure when the SES was administered electronically (computer-assisted survey interviewing) as compared to the traditional paper-and-pencil method.

The SES measures four types of SA: rape, sexual coercion, attempted rape, and sexual contact. The scoring guidelines require that responses be summed to create non-redundant scores that place each participant into a mutually exclusive category based on her/his most severe experience. This approach results in percentages that total 100%. According to the author's guidelines, the SES responses should be scored as follows:

1. Nonvictim: items 1-7 checked 0 times on a, b, c, d, and e.

2. Sexual contact: item 1 checked any number of times > 0 on c, d, and e, and no other responses > zero to any other items from 2 to 7.

3. Sexual coercion: any item 2 through 7 checked > zero times to a or b, and all options c through e on items 1 through 7 checked zero times.

4. Attempted rape: items 5, 6, or 7 checked any number of times > 0 to c, d, or e, and items 3, 4, and 5 checked 0 times to c, d, and e regardless of responses to any other items.

5. Rape: items 3, 4, and 5 checked any number of times > 0 to c, d, or e regardless of responses to any other items.

For this study, I used the SES-SFV as an additional screening tool for SA (along with the participant's acknowledgement that by agreeing to participate in the study she or he had experienced SA within the past five years). Therefore, a positive response to any of the first seven SES-SFV items was used to indicate that the person was sexually assaulted according to the definition of SA used for this study. Additionally, the question that asked, 'Have you ever been raped?" was considered for analysis. This variable (i.e., rape) was observed as a "yes" or "no" response. No multivariate analyses were conducted on these variables nor were reliability scores calculated, since the responses were used solely for SA screening purposes and the SES data were not considered for the substantive analysis. However, the supplemental analyses include a description of regret levels (low, medium, and high) among participants who were raped versus other types of SA (e.g., fondling).

Demographic Information

The Demographic and Assault Characteristics Questionnaire (see Appendix A) was adapted from the Massachusetts Sexual Assault Evidence Collection Kit (Massachusetts Executive Office of Public Safety & Security, 2008). The questionnaire was developed based on input from clinical and forensic experts in the fields of SA, and faculty from Boston College. Seven of the questions pertain to demographic information in a multiple-choice response format. The demographic variables include: current age, age at time of SA, gender, race, education, occupational status, and annual income.

Assault Characteristics

SA disclosure. This variable asked if the SA had been disclosed to anyone. The variable was observed as a "yes" or "no" response.

Report. This variable asked if the SA had been reported to the police. This variable was observed as a "yes" or "no" response.

SA criminal case status. This variable was posed only to participants who reported the SA to the police and it inquired about criminal case status. Unfavorable outcomes included affirmative responses to the following items: "No one was ever arrested;" "Someone was arrested, but the case was dropped before it went to trial;" and "Someone was arrested and found not guilty." Favorable outcomes included affirmative responses to the following items: "Someone was arrested and is awaiting trial or is being tried right now" and "Someone was arrested and found guilty."

Relationship to assailant. This variable addressed the relationship between the participant and the assailant(s). Potential response options included stranger, acquaintance, friend, boyfriend/girlfriend, or date.

Injuries. This variable addressed physical injuries sustained during the assault. Potential response options included physical (i.e., bruises, scrapes/cuts, head, and muscle/bone) and genital injuries.

Threats/weapons used. This variable addressed the use of threats and/or weapons during the assault. Potential response options included verbal threats, choking, biting, hitting, weapons (i.e., burn/gun/knife), and chemical restraint.

Adverse Health Outcomes

Health complications. This variable concerned health complications related to the assault. Potential response options included unplanned pregnancy, STIs, anxiety, suicidality (i.e., suicidal thoughts or attempts), weight change (loss/gain), and no health complications reported.

Non-health complications. This variable asked about other complications related to the assault. Potential response options included work, economic, social, and other complications.

Professional treatment. This variable addressed whether or not the victim sought professional treatment following the assault. This variable was observed as a "yes" or "no" response.

Depression. The Patient Health Questionnaire (PHQ-9) is a 9-item, self-administered questionnaire used to assess the severity of depressive symptoms (Spitzer, Williams, & Kroenke, 2005) (see Appendix A). The PHQ-9 has demonstrated excellent test-retest reliability and internal consistency (Cronbach's alpha of .86) and it has been used to study participants with diverse demographic characteristics, including young women who participated in the PRIME-MD PHQ Obstetrics-Gynecology Study (Spitzer, et al., 1994). Construct validity was established by demonstrating a strong inverse association between increasing PHQ-9 scores and worsening function on six other scales. The PHQ-9 correlated most highly with mental health (.73), followed by general health perceptions (.55), social functioning (.52), and role functioning (.43), physical functioning (.43), and bodily pain (.33). External validity was established by replicating the findings from one study of 3,000 primary care patients to a second study that included 3,000 obstetrics-gynecology patients (Kroenke, Spitzer, & Williams, 2001).

The PHQ-9 scores range from a low of 0 to a high of 27 and it can be completed in less than one minute. Answers to the nine items are summed and yield a single measure of depression. The question was posed as follows: "Over the past 2 weeks, how often have you been bothered by any of the following problems?" Participants were asked to rate the items according to the frequency of their symptoms on a 4-point scale: "Not at All" = 0, "Several Days" = 1, "More Than Half the Days" = 2, and "Nearly Every Day" = 3. Major depressive

syndrome is suggested if five or more of the nine items are selected at least "More than half the days" and either item 1a or 1b is positive (i.e., at least "More than half the days"), which would yield a score of greater than or equal to 12. Minor depressive syndrome is suggested if, of the nine items, b, c, or d are selected and either item 1a or 1b is positive (i.e., at least "More than half the days" is indicated), which would yield a score of equal to or greater than eight.

PTSD. The specific event version of the PTSD Checklist (PCL-S) (Weathers, Litz, Herman, Huska, & Keane, 1993) (see Appendix A), which was developed at the National Center for PTSD, measures PTSD symptomatology as related to a specific stressful event. In this study, the stressful event was defined as a SA. The self-report instrument is composed of 17 items and it is derived from the military version of the PCL (PCL-M), which has demonstrated favorable psychometric properties (Norris & Hamblen, 2003). In a sample of 40 participants, which included individuals who had been sexually assaulted, Blanchard, Jones-Alexander, Buckley, and Forneris (1996) reported a coefficient alpha of .94 and overall correlation between total PCL-S and the Clinician Administered PTSD Scale (Blake et al., 1995) scores of .93, demonstrating high construct validity of the PCL-S (Norris & Hamblen, 2003).

Items on the PCL-S were rated on a 5-point scale as follows: "Not a Bit" = 1, "A Little Bit" = 2, "Moderately" = 3, "Quite a Bit" = 4, "Extremely" = 5, which results in a severity score that ranges from a low of 17 to a high of 85. A total score of 44 or more is suggestive of PTSD in the general population. Additionally, participants could select "I Prefer Not to Answer," which was coded as missing data. Answers to the individual items were summed, yielding a single measure of PTSD.

Alcohol. T-ACE is a mnemonic for a four-item, self-administered alcohol-screening questionnaire (Sokol, Martier, & Ager, 1989) (see Appendix A).

The T-ACE is the alcohol screening survey recommended for pregnant women by the American College of Obstetricians and Gynecologists (ACOG) (1994), and it has demonstrated validity in an obstetric-gynecological study that included 971 socioeconomically diverse women. In one study, the T-ACE correctly identified 69% of the risk-drinkers (sensitivity) with a positive predictive value of 23% (Chang et al., 1998).

The questionnaire requires a "yes" or "no" answer to questions about tolerance to alcohol, being annoyed by another person's criticism of an individual's drinking, attempts to cut down, and having a drink first thing in the morning (an "eye-opener") (Diekman et al., 2000). T-ACE scores ranged from a low of zero to a high of four. Answers to the individual items were summed, yielding a single measure of alcohol usage. A score of two or more points indicates high-risk alcohol use.

Medications and drugs. The following questions were included to screen for drug abuse: 1. "Do you take any medications (prescribed or over-the-counter) for medical reasons?" and 2. "Have you used drugs other than medications that are required for medical reasons?" If the participants respond positively, they are then asked to describe the drug(s), dosages, and frequency with which they take the drug(s). The questions were adapted from the Drug Abuse Screening Test (DAST) (Skinner, 1982), a 20-item questionnaire designed to screen for drug abuse.

Statistical Methods

Missing Values Management

SPSS, version 16 is the software program I used to manage and analyze the data. The data were examined for missing and skewed data. Since regret is the dependent variable, (which is derived from the five-item DRS that ranged from a low score of 5 to a high score of 25), these

responses were the first to be examined for missing data. It was determined, a priori, that if there were more than two missing responses from the DRS, then the case would be deleted. In cases in which one or two responses were missing, the mean was imputed based on the available responses for that particular participant from the DRS subscale items. In cases in which there were missing data for the independent variables, a mean response was calculated based on available data from all participants for that variable and the overall mean value was imputed to replace the missing data. For all categorical and continuous independent variables, only cases that had valid responses for the dependent variable were retained for analysis.

Variable Coding

Dummy variables were created for the following categorical variables and for some variables response categories were collapsed due to low response rates.

SA criminal case status. Due to low response rates among many of the response choices, and based on evaluation of the similarities among the response items, the responses were collapsed and dichotomized into two levels: unfavorable and favorable criminal case outcomes. Unfavorable outcomes included affirmative responses to the following items: "No one was ever arrested;" "Someone was arrested, but the case was dropped before it went to trial;" and "Someone was arrested and found not guilty." Favorable outcomes included affirmative responses to the following items: "Someone was arrested and is awaiting trial or is being tried right now" and "Someone was arrested and found guilty."

Relationship to assailant. Four dummy variables were created to describe this variable, which resulted in the following levels: Stranger, acquaintance, friend, and boyfriend/girlfriend /date (BF/GF/Date). Due to the limited number of cases, and based on the similarities in the

relationship dynamic, the responses for boyfriend, girlfriend, and date were collapsed into one category (BF/GF/Date) before this dummy variable was created.

Physical injuries. Due to the limited number of cases among the response categories, and based on an evaluation of the similarities among the responses, the response categories were collapsed and dummy variables were created, which resulted in two variable levels: physical injuries and genital injuries.

Threats/weapons used. Due to the limited number of cases and based on similarities among the responses some groupings were collapsed. The responses that reflected being choked, bitten, or hit were collapsed to create one dummy variable, choke/bite/hit. Likewise, reports of use of a burn, gun, or knife were collapsed into one dummy variable that is referred to as "weapon." Four dummy variables were created to answer this question and the following levels were created: verbal threat, choke/bite/hit, weapon (burn/gun/knife), and chemical restraint.

Health complications. This variable concerned health complications related to the assault. Potential response options include: unplanned pregnancy, STIs, anxiety, suicidality (e.g., suicidal thoughts or attempts), weight change (loss/gain), and no health complications reported.

Other complications. This variable asked about other (e.g., non-health related) complications related to the assault. Four dummy variables were created to address this question, which resulted in the following levels: work, economic, social, and other complications.

Preliminary Analysis

Descriptive statistics (e.g., frequencies, percentages, and means) were conducted on the study variables. For continuous variables, data are presented as the mean and standard deviation (SD). The data were examined to ascertain that assumptions for multiple regression were met. Residual scatterplots were assessed for normality, linearity, and homoscedasticity, Mahalanobis'

Distance and Cook's Distance were generated to assess the influence of outliers; and tolerances were evaluated for multicollinearity. Lastly, the Durbin-Watson statistic was calculated to evaluate independence among the variables selected for the multiple regression analysis (Hazard Munro, 2005).

Pearson and Spearman rho correlations were generated and results were interpreted as appropriate to the measurement scales of the respective variables (Polit & Hungler, 1999). Correlation between the dependent variable (regret) and the independent variables, and correlations among the independent variables themselves were evaluated. Guidelines for selecting independent variables for the multiple regression analysis included those that correlated with regret ($r \geq .26$) and did not highly correlate ($r \geq .70$) with each other (Hazard Munro, 2005). Bonferroni adjustment was made for multiple correlations.

Additionally, supplemental analyses were performed to describe the relationship between regret and the following relevant variables: police reporting and types of SA. The relationship between assailant relationship and police reporting is described.

Multivariate Analysis

Selected independent variables were entered into a hierarchical multiple regression analysis designed to describe the extent and manner in which the variables describe variations in regret. The logical entry order of the variables (i.e., "blocks") was based on knowledge derived from the review of the literature, expert panel opinion, and the principal investigator's clinical experience. Variables entered into the model included those that had a statistically significant effect on regret.

The *first block* entered into the model included independent variables that captured assault characteristics. The *second block* was comprised of variables that represent adverse

health outcomes. The final regression model describes the relationship between regret and the selected independent variables.

Supplemental Analysis

Supplemental analyses were performed on selected variables that were particularly relevant to the study topic. Chi-square analyses were conducted to examine the relationship between levels of regret (low, medium and high) and the following descriptive characteristics: police reporting and types of SA. Also, a chi-square test was performed to examine the relationship between assailant relationship and police reporting.

CHAPTER 4

Results

In this chapter, results from the preliminary, substantive and supplemental analyses are presented.

Missing Values

Forty-one cases met the predetermined criterion with three or more blank responses. Therefore, these cases were deleted from the analysis, which reduced the sample size to 78. Of note is that 36 of the participants failed to respond to any of the survey questions. In cases in which one or two items from the DRS were missing, the mean, which was based on the available responses, was imputed for that particular participant.

Preliminary Analyses

Data were examined and met assumptions for normality, linearity and homoscedasticity. The independence of variables assumption was upheld and high tolerances indicated no multicollinearity. There were no influential outliers (Hazard Munro, 2005).

Study Sample

Sample Description

One hundred and nineteen respondents granted consent to participate in the study. Thirty-six of the respondents answered only the consent question and left the other survey items blank, thus reducing the sample size to 83. Another five participants were eliminated from the study because they responded to only one or two of the items on the five-item DRS, reducing the sample to a final size of 78. This sample size was determined to be adequate based on guidelines established in Tabachnick and Fidell (1999), who recommended a minimum of 5-10 times as

many cases as there are independent variables in the regression equation. Ultimately, there were four independent variables entered into the final regression model.

The final sample included women and men, between the ages of 18-25 years, who reported experiencing SA during the past five years. Participants were predominantly female and White, with 5% Black, and 4% Hispanic. The mean age of the respondents was 22.1 years (*SD* = 2.1 years) and the reported mean age at the time of assault was 19.5 years (*SD* = 2.1 years). Forty-one percent of the participants had earned a college degree and more than half (53%) were currently enrolled as college students. Forty-one percent of the participants identified themselves as non-students and employed. Forty-four percent of the participants reported an annual income of $10,000-50,000 and 19% earned less than $10,000. Study sample characteristics are presented in Table 1.

Table 1

Summary Statistics for Gender, Race, Education, Occupation, and Income (N = 78)

Variable	Frequency	Percentage
Gender		
Female	70	89.7%
Male	6	7.7%
Other*	2	2.6%
Race		
White	59	75.6%
Black	4	5.1%
Hispanic	3	3.8%
Asian/Pacific Islander	2	2.6%
Native American	1	1.3%
Multiracial	1	1.3%
Prefer not to answer/No answer	8	10.3%
Education		
HS Diploma or GED Certificate	5	6.4%
Some College	41	52.6%
Associate's Degree	5	6.4%
Bachelor's Degree	23	29.5%
Master's Degree	4	5.1%
Occupation		
College Student/Unemployed	22	28.2%
College Student/Employed	19	24.4%
Employed/Non-student	32	41.0%
Unemployed/Non-student	5	6.4%
Annual Income		
< $10,000	15	19.2%
$10,000-$50,000	34	43.6%
$50,000-$100,000	7	9.0%
$100,000-$150,000	7	9.0%
>$150,000	5	6.4%
Prefer not to answer/No answer	10	12.8%

*One participant identified as "transgender" and another declined to answer this question

Reliability of the Instruments

Cronbach's alpha coefficients were calculated for the instruments that were used to measure regret (the DRS), depression (the PHQ-9), and PTSD (the PCL-S). Reliability estimates ranged from .91 to .93 indicating overall high reliabilities for all the measures employed in the substantive regression analysis (Burns & Grove, 2005). These findings are presented in Table 2.

Table 2

Reliability of Instruments Used to Measure Regret, Depression, and PTSD (N = 78)

Instrument	Number of Items	Cronbach's Alpha
Decision Regret Scale (DRS)	5	.93
Patient Health Questionnaire-9 (PHQ-9)	9	.91
PTSD Checklist-Specific version (PCL-S)	17	.92

Descriptive Analyses

Regret

Overall, the mean regret score, which ranges from a low of 5 to a high of 25, was 13.46 (*SD* = 5.8). For the purpose of description, scores for levels of regret are described as low (5-11), medium (12-18), and high (19-25). These findings are reported in Table 3.

Table 3

Level of Regret (N = 78)

Level of Regret (*M* = 13.46, *SD* = 5.8)	Frequency	Percentage
Low (5-11)	21	26.9%
Medium (12-18)	37	47.4%
High (19-25)	20	25.7%

Sexual Experiences Survey (SES)

Among the participants who responded to the SES questions (n = 77), 66 (85.7 %) reported that they had been raped and 11 (14.3%) described their assault as an act other than rape (e.g., fondling, kissing, oral sex). Among the participants who identified the gender of their assailant, 61 (92.4%) participants reported that their assailant was male; one (1.5%) identified a female assailant; three (4.5%) described being assaulted by both a male and female; and one person (1.5 %) was unsure of the gender of the assailant.

Assault Characteristics

Disclosure, police report, and criminal case status. Eighty-eight percent of the participants disclosed the SA to someone and 40% reported the assault to the police. Among those who filed a police report, 82% indicated that they had an unfavorable criminal case outcome (e.g., no one arrested or the case was dropped before the trial), and 18% indicated that they had a favorable outcome (e.g., someone was arrested and found guilty).

Relationship to assailant and threats/weapons. Seventeen percent of the participants described their relationship to the assailant as a stranger, while 65% indicated that they knew their assailant (e.g., acquaintance, friend, date). Forty-one percent reported physical injuries sustained during the assault (e.g., cuts, head, muscle/bone) and 32% reported genital injuries. The following threats and weapons were used during the assaults: verbal threats, 30%; choking/hitting/biting, 30%; chemical restraint, 18%; and weapon (gun/knife/burn), 13%.

Adverse Health Outcomes

Health complications. Participants reported the following health complications as a result of their assault: anxiety, 85%; weight change (loss/gain), 49%; suicidality, 46%; STIs, 5%; and pregnancy, 3%.

Other complications and treatment. Seventy-eight percent indicated that they experienced social complications resulting from the assault, while 22% reported work, and 15% indicated economic complications. Fifty-one percent of the participants indicated that they sought professional treatment following the assault.

Depression and PTSD. Current depression was measured with the PHQ-9, a nine-item questionnaire that yielded a score that ranges from a low of 0 to a high of 27. The mean score for depression was 10.4 (*SD* = 6.4). A score for current PTSD was derived from the PCL-S, which is a 17-item scale that ranges from 17 (low) to 85 (high). The mean score for PTSD was 47.0 (*SD* = 15.9).

Alcohol, medications, and drugs. Alcohol use was assessed using the T-ACE, a four-item alcohol screening instrument that ranges from a low of zero to a high of four. The mean score for alcohol use was 1.38 (*SD* = 1.2). Direct questions that required a "yes" or "no" response were posed regarding the use of medications (prescribed and over-the-counter) and drugs (i.e., non-prescribed substances). Thirty-eight (49%) of the participants indicated that they were using medication, and 11 (15%) reported the use of non-prescribed substances (i.e., "drugs"). Descriptive data for the continuous variables are reported in Table 4 and frequencies for the dichotomous variables are reported in Table 5.

Table 4

Summary Statistics for Continuous Variables (N = 78)

Variable	Range	*M*	*SD*
Regret	5-25	13.5	±5.8
Age	18-25	22.3	±2.2
Depression	0-27	10.4	±6.4
PTSD	17-85	47.0	±15.9
T-ACE	0-4	1.4	±1.2

Table 5

Frequencies and Percentages for Categorical Variables

Independent Variables	*N*	Yes	No
Disclosure of SA	78	*n* = 69 88.0%	*n* = 9 12.0%
Police Report	78	*n* = 28 35.9%	*n* = 50 64.1%
Relationship to Assailant:			
Stranger	78	*n* = 13 17.0%	*n* = 65 83.0%
Acquaintance	78	*n* = 22 28.2%	*n* = 56 71.8%
Friend	78	*n* = 11 14.1%	*n* = 67 85.9%
BF/GF/Date	78	*n* = 18 23.1%	*n* = 60 76.9%
Injuries:			
Physical	78	*n* = 32 41.0%	*n* = 46 59.0%
Genital	78	*n* = 25 32.1%	*n* = 53 67.9%

Independent Variables	*N*	Yes	No
Threats/Weapons:			
Verbal	78	*n* = 24 30.1%	*n* = 54 69.9%
Choke/Bite/Hit	78	*n* = 23 29.5%	*n* = 55 70.5%
Weapon	78	*n* = 10 12.8%	*n* = 68 87.2%
Chemical Restraint	78	*n* = 14 18.0%	*n* = 64 82.0%
Health Complications:			
Pregnancy	78	*n* = 2 2.6%	*n* = 76 97.4%
STI	78	*n* = 4 5.1%	*n* = 74 94.9%
Anxiety	78	*n* = 66 84.7%	*n* = 12 15.3%
Suicidality	78	*n* = 36 46.2%	*n* = 42 53.8%
Weight Change	78	*n* = 37 48.7%	*n* = 40 51.3%
No Health Complications	78	*n* = 10 12.8%	*n* = 68 87.2%
Non-Health Complications			
Work	78	*n* = 17 21.8%	*n* = 61 78.2%
Economic	78	*n* = 12 15.4%	*n* = 66 84.6%
Social	78	*n* = 61 78.2	*n* = 17 21.8%

Independent Variables	*N*	Yes	No
Other Complications	78	*n* = 11 14.1%	*n* = 67 85.9%
Treatment	78	*n* = 40 51.3%	*n* = 38 48.7%
Medications	78	*n* = 38 49.0%	*n* = 40 51.0%
Drugs	72	*n* = 11 15.0%	*n* = 61 85.0%

Correlation Analyses

Bivariate correlational analyses to examine the relationships among the independent variables, and between the independent variables and the dependent variable were conducted. The Pearson coefficient was generated for the normally distributed, continuous variables (see Appendix B), and the Spearman rho correlation coefficient was generated for all study variables to examine the correlations among the continuous and categorical variables (see Appendix C). A Bonferroni adjusted alpha level for multiple correlations is reported. Results for selected study variables are presented in Table 6.

Assault Characteristics

Reporting the assault to the police (r_s = -.37) and identifying the assailant as a stranger (r_s = -.43) were both negatively correlated with regret ($p < .001$). Additionally, being assaulted by a stranger was correlated with an increase in police reporting (r_s = .38, $p < .001$).

Adverse Health Outcomes

Experiencing a weight change (i.e., loss/gain) was correlated ($r_s = .26$) with an *increase* in regret ($p < .05$). Although weight change was not significant with a Bonferroni-adjusted level of significance ($p < .01$), a decision was made to include it in the multiple regression analysis based on theoretical considerations (Wonderlich et al., 2001). Seeking treatment following the assault was correlated ($r_s = -.31$) with a *decrease* in regret ($p < .001$). Additionally, seeking treatment was correlated ($r_s = .41$) with an increase in reporting the assault to the police ($p < .001$).

Table 6

Spearman Rho Correlations (r_S) Among Selected Study Variables

(Bonferroni-adjusted alpha level, $p < .01$)

	Regret	Report	Stranger	Weight Change	Treatment
Regret	1.00				
Report	-.37***	1.00			
Stranger	-.43***	.38***	1.00		
Weight Change	.26*	.13	.18	1.00	
Treatment	-.31**	.41***	.23*	.13	1.00

*$p < .05$
**$p < .01$
***$p < .001$

Multiple Regression Analysis

Based on a review of the literature, my clinical experience, and the findings from the correlation analyses, four variables were selected for the multiple regression analysis. Stranger

and report, which were categorized as assault characteristics, were entered in Block 1. Treatment and weight change were entered in Block 2 as adverse health outcomes.

Results of Regression Analysis: Model 1

The first block entered into the model included two independent variables that were categorized as assault characteristics: stranger (β = -.31, $p < .01$) and report (β = -.18, $p < .05$). Block 1 accounted for 18.5% of the variance in levels of regret ($F = 9.75$, $df = 2$, $p < .001$).

Results of Regression Analysis: Model 2

In the second model, two variables, weight change and treatment, were categorized as adverse health outcome measures, and were added to the equation. Only weight change was statistically significant ($\beta = .38$, $p < .001$). Overall, the four variables together accounted for 33.3% of the variance ($F = 10.61$, $df = 4$, $p < .001$). In the final, model only weight change and stranger (β =-.36, $p < .001$) were statistically significant ($p < .001$). Unstandardized Beta weights fell within the upper and lower limits of 95% confidence interval ranges for all variables entered in the regression. Results from the regression analysis are reported in Table 7.

Table 7

Summary Statistics for the Hierarchical Regression: Report, Stranger, Weight Change, and Treatment on Regret (N = 78)

	Independent Variables	Unstandardized Regression Weight	Standard Error of Beta (β)	Standardized Regression Weight (β)	Constant	R	Adjusted R^2 / R^2	*SEE*	t
Block 1	Report	-2.76	1.33	-0.23					-2.07*
	Stranger	-4.82	1.71	-0.31					-2.81**
					15.25	0.454	0.185*** / 0.206***	5.21	
Block 2	Report	-2.21	1.29	-0.18					-1.71
	Stranger	-5.50	1.57	-0.36					3.50***
	Weight Change	4.39	1.09	0.38					4.02***
	Treatment	-2.18	1.18	-0.19					-1.85
					14.14	0.606	0.333*** / 0.368***	4.72	

*$p < .05$
**$p < .01$
***$p < .001$

The Regression Equation

While it was not the goal of this study to generate an individual regret score, should a researcher or clinician choose to do so, the equation is as follows: Regret + E = 14.14 + (-5.50)Stranger + (4.39)Weight Change + (-2.21)Report + (-2.18)Treatment. Controlling for other factors, individuals who were assaulted by a stranger, on average, have a 5.50 unit lower regret score compared to individuals who were not assaulted by a stranger. Controlling for other factors, individuals who reported a weight change (loss or gain) following their assault, on average, have a 4.39 unit higher regret score compared to those who did not report a weight change. Controlling for other factors, those who reported the assault to the police, on average, have a 2.21 unit lower regret score compared to individuals who did not report. Controlling for other factors, those who sought professional treatment following the assault, on average, had a 2.18 unit lower regret score compared to people who did not seek professional treatment.

Supplemental Analyses

Pearson chi-square tests were performed to describe differences in levels of regret (low, medium, and high) and the following relevant study variables: police reporting and types of SA. Additionally, the differences between assailant relationship and police report were examined. A discussion of these results follows.

Regret and Police Reporting

Among those who reported SA (n = 28, 35.9%), 18 (64.2%) experienced low regret about their decision to report, 6 (21.4%) experienced medium regret, and 4 (14.3%) reported high regret. Among those participants who did *not* report (n = 50, 64.1%), 14 (28%) reported low regret, 22 (44%) reported medium regret, and 14 (28%) reported high regret. Therefore, in this pilot study, participants who reported their SA to the police indicated decreased levels of regret

as compared to people who did *not* report ($X^2 = 9.77$, $df = 2$, $p < .05$). The difference in regret between the groups who reported and those who did not report was statistically significant. These findings are presented in Table 8.

Table 8

Pearson Chi-square Results: Level of Regret and Police Reporting (N = 78)

Level of Regret	Report (n = 28, 36%)	Not Report (n = 50, 64%)	Row Totals
Low (0-8)	n = 18 (64.2%)	n = 14 (28%)	n = 32 (100%)
Medium (9-17)	n = 6 (21.4%)	n = 22 (44%)	n = 28 (100%)
High (18-25)	n = 4 (14.3%)	n = 14 (28%)	n = 18 (100%)

$X^2 = 9.77$, $df = 2$, $p < .05$

Levels of Regret and Types of SA

Chi-square analysis was performed on the survey item (yes/no) that asked, "Have you ever been raped?" Among individuals who were raped (n = 49, 74.2%), 23 (46.9%) experienced low regret, 15 (30.6%) experienced medium regret, and 11 (22.4%) experienced high regret, as compared to those who indicated that they were not raped (and presumably experienced another type of SA) ($X^2 = 3.62$, $df = 4$, $p > .05$). Six (9.1%) of the participants were unsure if their SA included rape . Differences in levels of regret between the participants who were raped and those who were not raped were *not* statistically significant. Results are presented in Table 9.

Table 9

Pearson Chi-square Results: Level of Regret and Type of SA (N = 66)

Level of Regret	Rape (n = 49)	Other SA (n= 11)	Unsure (n = 6)	Row Totals
Low (5-11)	n = 23 (46.9%)	n = 4 (36.3%)	n = 1 (16.7%)	n = 28
Medium (12-18)	n = 15 (30.6%)	n = 5 (45.5%)	n = 4 (66.7%)	n = 24
High (19-25)	n = 11 (22.4%)	n = 2 (18.1%)	n = 1 (16.7%)	n = 14

(X^2 = 3.62, df =4, p > .05)

Police Reporting and Relationship to the Assailant

Differences in police reporting and relationship to the assailant (i.e., stranger vs. non-stranger, acquaintance vs. non-acquaintance, friend vs. non-friend, and BF/GF/Date vs. non-BF/GF/Date) were examined. Among those who did *not* report (n = 50, 64.1%), 47 (94.0%) participants described their assailant as a non-stranger as compared to a stranger (X^2 = 11.41, df =1, p < .001), and 34 (68.0%) indicated that their assailant was a non-BF/GF/Date as compared to an assailant who was a BF/GF/Date (X^2 = 6.25, df =1, p < .05). Chi-square tests for police reporting and stranger assailant (vs. non-stranger assailant) and between police reporting and BF/GF/Date (*vs.* non-BF/GF/Date) were statistically significant. Findings of the Chi-square tests are presented in Tables 10-13.

Table 10

Pearson Chi-square Results: Police Reporting and Stranger (*N* = 78)

Crosstabs

			Stranger		
			No	Yes	Total
Report	No	Count	47	3	50
		% within Report	94.0%	6.0%	100.0%
		% within Stranger	72.3%	23.1%	64.1%
		% of Total	60.3%	3.8%	64.1%
	Yes	Count	18	10	28
		% within Report	64.3%	35.7%	100.0%
		% within Stranger	27.7%	76.9%	35.9%
		% of Total	23.1%	12.8%	35.9%
Total		Count	65	13	78
		% within Report	83.3%	16.7%	100.0%
		% within Stranger	100.0%	100.0%	100.0%
		% of Total	83.3%	16.7%	100.0%

Chi-square test

	Value	df	Sig. (2-sided)
Pearson Chi-Square	11.410[a]	1	.001
Number of Valid Cases	78		

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.67.

b. Computed only for a 2x2 table

Table 11

Pearson Chi-square Results: Police Reporting and Acquaintance (*N* = 78)

Crosstabs

			Acquaintance		
			No	Yes	Total
Report	No	Count	35	15	50
		% within Report	70.0%	30.0%	100.0%
		% within Acquaintance	62.5%	68.2%	64.1%
		% of Total	44.9%	19.2%	64.1%
	Yes	Count	21	7	28
		% within Report	75.0%	25.0%	100.0%
		% within Acquaintance	37.5%	31.8%	35.9%
		% of Total	26.9%	9.0%	35.9%
Total		Count	56	22	78
		% within Report	71.8%	28.2%	100.0%
		% within Acquaintance	100.0%	100.0%	100.0%
		% of Total	71.8%	28.2%	100.0%

Chi-Square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.222[a]	1	.638
Number of Valid Cases	78		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.90.

b. Computed only for a 2x2 table

Table 12

Pearson Chi-square Results: Police Reporting and Friend (*N* = 78)

Crosstabs

			Friend		
			No	Yes	Total
Report	No	Count	44	6	50
		% within Report	88.0%	12.0%	100.0%
		% within Friend	65.7%	54.5%	64.1%
		% of Total	56.4%	7.7%	64.1%
	Yes	Count	23	5	28
		% within Report	82.1%	17.9%	100.0%
		% within Friend	34.3%	45.5%	35.9%
		% of Total	29.5%	6.4%	35.9%
Total		Count	67	11	78
		% within Report	85.9%	14.1%	100.0%
		% within Friend	100.0%	100.0%	100.0%
		% of Total	85.9%	14.1%	100.0%

Chi-Square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.508[a]	1	.476
Number of Valid Cases	78		

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.95.

b. Computed only for a 2x2 table

Table 13

Pearson Chi-square Results: Police Reporting and BF/GF/Date ($N = 78$)

Crosstabs

			BF/GF/Date		
			No	Yes	Total
Report	No	Count	34	16	50
		% within Police Report	68.0%	32.0%	100.0%
		% within BF/GF/Date	56.7%	88.9%	64.1%
		% of Total	43.6%	20.5%	64.1%
	Yes	Count	26	2	28
		% within Police Report	92.9%	7.1%	100.0%
		% within BF/GF/Date	43.3%	11.1%	35.9%
		% of Total	33.3%	2.6%	35.9%
Total		Count	60	18	78
		% within Police Report	76.9%	23.1%	100.0%
		% within BF/GF/Date	100.0%	100.0%	100.0%
		% of Total	76.9%	23.1%	100.0%

Chi-square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.247[a]	1	.012
Number of Valid Cases	78		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.46.

b. Computed only for a 2x2 table

Open-Ended Question Data

The final question in the survey invited the participants to write about any aspect of the study. Five participants responded to this inquiry in the following way:

1. “My first sexual assault was when I was a virgin, and is the reason I'm not anymore. I'm getting better every day, but it still haunts me.”

2. “I was sexually assaulted by a female perpetrator, and your survey seems very geared toward male perpetration. I was surprised by this, especially since rape was clearly the theme in the last page I filled-out and not sexual assault, especially when perpetrated by females against males and still forcing sex- or was that part of petting, kissing and removing clothing?”

3. “Please use this to help others who have been affected.”

4. “In your questions about the actual assault you did not seem to take into account that a women could rape someone as well”.

5. “Idea for future studies: nature of contact between perpetrator and victim following a date-rape.”

Responses (1), (3), and (5) are informative statements that include a personal disclosure, an expression of gratitude, and suggestions for future research. The foci of responses (2) and (4) are that the participants perceived the survey to be geared toward individuals who had been sexually assaulted solely by male assailants. The comments suggest that these perceptions were based on questions asked as part of the SES portion of the questionnaire, which poses specific questions regarding the nature of the assault.

Summary of the Results

The purpose of this study was to describe variations in level of regret in relation to making the decision to report a SA to the police. Twenty-seven percent of the participants

reported low levels of regret, 48% reported medium regret scores, and 26% reported high levels of regret. Thirty-six percent of the participants reported their assault to the police. On average, people who did *not* report a SA to the police were more likely to experience a higher level of regret. Among those who reported, 14% described high levels of regret as compared to 28% of the non-reporters who indicated high regret. On average, people who did not report were more likely to identify their assailant as a non-stranger as compared to a stranger, and as a non-BF/GF/Date as compared to a BF/GF/Date. These findings were statistically significant ($p < .001$). The final model included four independent variables (i.e., weight change, stranger, treatment, and report) and it explained 33.3% (adjusted R^2) of the variability in the overall score for regret. The final model is statistically significant ($F = 10.61$, $df = 4$, $p < .001$). In the final model two of the independent variables, weight change and stranger, were statistically significant ($p < .001$).

CHAPTER 5

Discussion and Summary

Introduction

The substantive analysis generated a regression model that has compelling explanatory power as four of the independent variables (weight change, stranger assailant, treatment sought, and police reporting) accounted for 33.3% of the variability in level of regret. Findings of this study indicate that individuals who experienced a weight change following the assault experienced increased regret, while those who were assaulted by a stranger, sought treatment following their assault, and filed a police report experienced decreased regret. Individuals who were assaulted by a stranger and sought treatment were more likely to report their assault to the police.

These descriptive findings are important because regret is a complex, nuanced, universal human emotion that influences the decision-making process. Understanding the influence of regret can lead to knowledge development and interventions that could assist people as they struggle with making difficult healthcare decisions, such as whether or not to report a SA.

In this chapter, interpretation of the study findings along with implications for research, clinical practice, nursing theory and knowledge, and public policy will be presented. The chapter concludes with a discussion of the study limitations.

Interpretation of the Findings

Weight Change

Weight change (loss or gain) was positively correlated with regret and was the independent variable that made the greatest contribution to the regression equation. Participants who reported a weight change following the assault were more likely to experience regret about

their decision to report the SA to the police. Given that regret has been defined as one of the most powerful negative emotions (Taylor, 1985), this finding is consistent with research addressing "emotional eating," which has been defined as "the tendency to overeat in response to negative emotions such as anxiety or irritability" (van Strien et al., 2007, p. 106). Stress has been associated with various changes in dietary behaviors that lead to weight changes due to stress-related cortisol reactivity that might cause some individuals to gain weight under stressful conditions while others may lose weight in response to stress (Block, He, Zaslavsky, Ding, & Ayanian, 2009; Newman, O'Connor, & Conner, 2007).

It is important to note that the survey question was designed to elicit information about either a weight gain or loss. Additionally, the weight change could have occurred during the past five years. Thus, this finding should be interpreted with caution in light of the lack of specificity and the well-known and diverse influences on weight change (Torres & Nowson, 2007). Certainly these results raise interesting questions such as: "Are people who are more likely to experience body weight changes after experiencing a trauma such as SA also more likely to be regretful about other decisions as well; or more generally, are people who are prone to experience regret also prone to emotionally eat?" Also, it is important to consider if weight changes could serve as a proxy for past depression or a underlying anxiety disorder.

Stranger Assailant

Following weight change, identification of the assailant as a stranger explained the most variance in the final regression model and it correlated with decreased regret. Additionally, this study found that, on average, people who reported the assault were more likely to have been assaulted by a stranger versus a non-stranger. These findings parallel those of researchers who have studied the barriers and facilitators to reporting SA and reported that individuals are less

likely to report a SA if the assailant is known to the person who has been assaulted (Fisher, Daigle, Cullen, & Turner, 2000).

Treatment

In the final model study, seeking professional treatment following the assault correlated negatively with regret and was not statistically significant. Seeking professional treatment can be categorized as a help-seeking behavior, which has been defined as one that is used to solve problems (Anderson & Danis, 2007). This finding complements the work of others from the literature who have reported that college-aged women who have experienced domestic violence exhibit help-seeking behaviors are more likely to be identified as victims and seek help (Amar & Gennaro, 2005).

This finding raises many questions about the relationship between regret and help-seeking behaviors, including the following:

1. Are people who seek professional treatment more likely to experience regret or are they more likely to seek treatment because of the negative effect of the regret?
2. Does a person's evaluation of the professional treatment seem to correlate with levels of regret? In other words, if people are pleased with the therapy that they have received, does that seem to correlate with their perceptions of regret?
3. Are people who seek help also more likely to report, which has been associated with decreased levels of regret?
4. Are those who report and seek help also more likely to participate in a survey of this nature?

Other issues raised concern whether or not the benefits derived from the professional treatment led to decreased levels of regret; or perhaps a lack of regret about the decision to report

is more reflective of a personality characteristic and is also likely to be associated with help-seeking behaviors such as seeking professional help. It would be useful to describe other help-seeking behaviors (e.g., support groups) and their relationship to regret.

Police Reporting

In the final model, reporting was negatively correlated with regret, was not statistically significant, and it contributed the least to the regression equation. On average, people who reported their SA to the police experienced *decreased* levels of regret about their decision to do so as compared to people who did not report their SA to the police.

These findings are consistent with the work of Fry and Barker (2001) who found that women who were sexually assaulted regretted inaction far more than action related to disclosing and seeking legal action for SA. It is important to note that reporting the SA to police was significant in Model 1 but was not significant in Model 2 of the regression analysis. Since it was not significant in the final model, it is reasonable to suggest that reporting shared influence with the other variables that were entered into the analysis.

These findings extend the literature on the reporting of SA, which has been described as "the second rape" (Burgess, O'Connor, Nugent-Borakove, & Fanflik, 2006). The research is useful for its delineation of a number of benefits individuals derive from participating in the difficult reporting process. For many, filing a police report represents the victim's entry into the purview and protection of the criminal justice system (albeit a system that is problematic) (Du Mont, Miller, & Myhr, 2003).

Gartner and Macmillan (1995) described the "social goods" that can be gained by persons as individual victims, and as members of the larger community. The benefits include a restored sense of well-being (Griffiths, 1999; Winkel & Vrij, 1993); referral and access to assault-related

health care, social, and legal services (Feldman-Summers & Norris, 1984; Gartner & Macmillan, 1995; Neville & Pugh, 1997); decreased risk of a repeat assault by the assailant through the potential apprehension, conviction, punishment, and rehabilitation of the offender (Feldman-Summers & Norris, 1984; Neville & Pugh, 1997); the deterrence of potential perpetrators of SA (Bachman, 1998); and improved social policy and research (Gartner & Macmillan, 1995). Anticipation of these benefits can be regarded as a facilitator to engage in the reporting process and might be associated with the findings of this study, decreased regret among those persons who do report a SA.

Study Implications

The study of regret among individuals who have experienced SA is in its infancy. Findings from this investigation provide the first description of this complex emotion as related to demographic variables, assault characteristics, and adverse health outcomes. Because regret is a powerful, universal, negative emotion that influences the complex process of decision-making, there are many implications for research on this topic that could be pursued by investigators in fields such as nursing, medicine, psychology, social work, and ethics.

Implications for Research

A next step in advancing the study of this important topic beyond this investigation is further examination of the relationships between weight changes, assailant relationship, police reporting, seeking treatment and regret. Future investigators should include a larger and more diverse sample in demographic profile such as socioeconomic status, age, and ethnicity. For example, responses to the SES questions could be analyzed to explore whether or not there appears to be a relationship between details of the assault and other variables such as depression and PTSD. Additionally, correlates of a variety of characteristics among those who reported and

those who did not their SA could be analyzed and the findings could lead to the development of a profile that could be useful in describing reactions of those who have been sexually assaulted. Additionally, investigators could replicate this study by targeting a larger and more diverse population for a sample and choosing other instruments to capture data on the variables of interest. Finally, path analysis could be done to determine if variables such as regret and reporting can be predicted by variables including weight change and help-seeking behaviors such as seeking professional treatment following an assault.

This universality of regret and the pervasiveness of weight issues, particularly among women, set the stage for interesting future studies whose investigators could more fully examine the relationship between and among these variables. Additionally, it would be informative to study personality or coping characteristics that might be associated with the experiences of both regret and weight changes.

Decision aid. A more concrete and specific application of the findings is to further research on the development of a decision aid to be used to assist patients as they struggle with the difficult decision of whether or not to report their assault. O'Connor and Jacobsen (2006, p. 25) defined decision aids as "Evidence-based tools to prepare people to participate in making specific and deliberated choices among healthcare options in ways they prefer." These tools were developed in response to the need for improved collaboration between providers and patients as the providers engaged in helping patients and families make decisions that incorporate personal values and goals (Wittmann-Price & Fisher, 2009).

The ROSA. The Reporting of Sexual Assault (ROSA) decision aid is one such tool that the principle investigator would propose be considered by those who care for persons who have experienced sexual assault. The ROSA is a laminated card that includes an algorithm and neutral

information to addresses many of the questions patients ask when struggling with the decision of whether or not to report (e.g.. How many people report SA? How many people regret reporting? How many cases go to trial?).

The ROSA is based on an empowerment model. The goal of this decision aid is to provide patients with information that will assist them in making difficult and timely decision, As is apparent from both the Ottawa Decision Support Framework (ODSF) (O'Connor, 1996) and clinicians' experience, when patients struggle with difficult reporting decisions, they often ask the clinician, "Do you think I will regret it if I report?" While no clinicians can answer this question with certainty, they can reference the findings from this study and speak factually about its results, which would be part of the ROSA. Additionally, such a tool would be welcomed by clinicians who are eager to provide support to their patients, but are hesitant to do so because of concern about exerting undue influence based on their own, subjective opinions about whether or not the patient should report the SA to the police. The ROSA could be updated to reflect future findings, which might emerge from replicated studies that will follow.

Implications for Psychiatric Practice

Psychotherapy. Janet Landman, psychologist and author of *Regret: The Persistence of the Possible* (1993), has contributed greatly to the study of this concept. Additionally, Landman has developed strategies wherein regret can be used as the focus of psychotherapeutic treatment goals and has argued that regret needs to be added to decision models. For example, Landman maintains that one cause of regret is that persons have not identified what they truly desire. Therefore, therapy sessions designed to help people make better decisions and avoid regret should focus on helping people identify and prioritize what is most important to them. Landman

stressed that regret can be a useful psychological tool. She wrote, “to blunt the pain of regret is to forego valuable information” (p. 23).

Landman (1993) maintained that regret serves many purposes--warning, mobilization, instruction, and moral behavior. Accordingly, she purported that “regret is one of those painful feelings that can be used in the service of greater mental health and personal integrity” (p. 23). She warned that we can avoid long-term problems by figuring out what regret can tell us in the present, as opposed to ignoring it in attempt to delay the discomfort of the exploration. Additionally, she encouraged people to identify themselves as either thinkers or feelers in order to better understand and manage regret. According to Landman, “If you are a thinker who feels too little, you can use therapy to help you be less afraid of feeling. Learning to hold on to feelings like regret will help you understand what they have to teach you.” On the other hand, if you are a “feeler” then you are likely to “regularly making impulsive decisions without enough forethought — you instead should think before making decisions about what you might regret later” (p.1). As Landman (1993) elaborated on the functional utility of regret, she compared it to a rear view window: “To drive forward well, we often use the rear view mirror; we do need to look backwards. That doesn’t mean that we . . . only look in the rear view mirror . . .regret works the same way. It’s useful in moving us forward” (p. 1).

Findings from my study have implications for psychiatric practice as regret is a universally human phenomenon with transformative powers: According to Landman (1993, p. 1): “We have the ability to compare the actual to the possible; this means we risk regret. Far from being irrational or a waste of time, regret has transformative powers that help us to learn and change in positive ways. . . . Regret, like grief, is transformed by working it through, which is lingering with it long enough to experience it deeply [both] emotionally and intellectually.”

Knowledge about regret derived from my study of individuals who have experienced SA brings us closer to understanding and optimizing the benefits of this complex, negative emotion.

Help-seeking behaviors. Finally, my findings are important for informing researchers and clinicians who are addressing the help-seeking behaviors of individuals who have been assaulted. It is important to study the interrelatedness of these concepts because they have been identified as important indicators of healthcare outcomes that include the evaluation of decisional quality, and identification as a victim, which increases the likelihood of being the recipient of needed services and care.

Implications for Nursing Knowledge and Theory

Findings from this study can contribute to the development of a nursing mid-range theory of regret. Theory synthesis could proceed through the following steps that have been suggested by nursing scholars Walker and Avant (2005, p. 135). According to the theorists, the first step is to "anchor" the theory with focal concepts. Based on interpretation of the results of this study, the focal concepts to a theory of regret could include "police reporting" and "help-seeking behaviors." The second step of theory synthesis is to review the literature to identify the interrelatedness of the focal concepts with the goal of providing greater specificity of the relationships. Finally, the concepts and statements related to the mid-range theory of regret would need to be presented in an integrated, cohesive, and efficient manner.

Implications for Public Policy

One of the most salient findings from this study is that people who reported their assaults to the police experienced significantly less regret about their decision to do so as compared to those who did not decide to report. While reporting a SA may not be in the best interest of every individual, it should be an option that is readily available to all. There is a need to study

individual's perceptions of barriers to reporting SA and work toward eliminating these so that individuals can be empowered to make their choice to report based on personal issues as opposed to issues of access. Understanding the role of regret and its influence on the evaluation of decisional quality can advance the study of these barriers.

It is reasonable to presume that having a better understanding of regret, an important component of the decision-making process, could influence interventions that might lead to an increase in the police reporting of sexual assault (e.g. use of decision aids, such as the ROSA). Again, while this is not necessarily the best option for each individual, the findings suggest that on average, people who report their SA to the police tend to experience less regret about their decision to do so than do those who do not report. Of course, from a public health and safety perspective, police reporting increases the chances that dangerous assailants will be brought to justice and removed as threats to others.

Study Limitations

Study Sample

Findings from this study must be evaluated in light of the study limitations. The sample size of 78 participants is one such limitation. While a sample of 78 is adequate for a descriptive study and a multiple regression analysis that includes four independent variables, the results cannot be generalized due to the small sample size. Additionally, the homogeneity of the sample is a limitation. The sample was limited to individuals between the ages of 18 and 25 years, who had been sexually assaulted during the past five years. Recruitment was done primarily on college campuses in the Boston area. Because of the inclusion criteria and the recruitment methods used, the sample represented a rather homogenous group in terms of demographic factors such as age, gender, race, education, and income.

Survey Format

The electronic, online survey format that was used to gathered self-report data for all study variables is another limitation of the study. The cross-sectional design, which allowed for the collection of data at only one point in the lives of the participants, is a limiting factor. Additionally, it is important to note that I used screening tools for current depression, PTSD, and alcohol and drug use; therefore, the actual prevalence of these phenomena in this sample is unknown.

Survey Questions

The survey questions (that required a "yes" or "no" response) designed to elicit information about weight change and treatment were posed broadly and lacked specificity. For example, the variable weight change was defined as a loss or gain, so the participant could not report the direction or magnitude of the weight change. Similarly, the participants were asked if they sought professional care following the assault, but the survey did not define or ask the participant to specify the type of professional treatment. Additionally, only *current* depression, PTSD, alcohol and medication were assessed. Also, the option of "I prefer not to answer" that was provided for most of the survey items may have limited the responses elicited from the participants.

Conclusions

The goal of this pilot study was to describe regret about police reporting in individuals who had experienced SA during the previous five years. Through an electronic survey that consisted of 34 items, 78 individuals participated in the study. Using multiple regression analysis, a model was created that explains a substantial portion (33.3%) of the variability in regret. The following variables were entered in the final model: weight change, stranger

assailant, treatment sought, and police report. Overall, people who reported the assault to the police reported lower levels of regret about their decision to do so. This research presents novel, descriptive data on the complex negative emotion of regret that contributes to the study of decision-making among individuals who have been sexually assaulted.

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Appendix A

1. Consent To Participate in the Survey

Hello,

You are invited to participate in a study examining the factors associated with the experience of sexual assault. My study asks people who have been sexually assaulted in the last 5 years how they felt about reporting. If you are between 18 and 25 and agree to be in the study, you will be asked to complete an on-line survey that should take about 15 minutes to complete. You will be asked questions about the sexual assault; your feelings about reporting the assault to the police; various health-related questions (such as questions about depression and substance use); and your background.

The survey is anonymous. There **is** no way for anyone to connect you with the answers you provide. Data from all participants will be combined and published for my dissertation and may also be presented at conferences or for journal publication. Your participation in this study is voluntary. You may withdraw your participation at any time for any reason. One way to exit the survey is to click on the "Exit the Survey" link that will be in the upper right-hand comer of the screen that will be displayed at all times. Also, most of the questions have a response option that includes "▮prefer not to answer."

There are no direct benefits or costs to you for participating in this study. There is a chance that some people may experience distress or anxiety while recalling the sexual assault and while answering the questions, such as feeling depressed or having flashbacks about the assault. ▮ want you to be aware of free, comprehensive, confidential services that are available if you want to talk to someone about your sexual assault.

The National Sexual Assault **Hotline** is operated by the Rape, Abuse &Incest National Network (RAINN), the largest anti-sexual assault organization in the USA. You can call the **hotline** from anywhere in the USA and your call will be connected automatically to a local rape crisis center in your area.

The National Sexual Assault **Hotline:** 1-800-656-HOPE(4673)

The RAINN **website:** www.RAINN.org

If you live in the Boston area, the Boston Area Rape Crisis Center (BARCC) offers a telephone **hotline** that is open **24/7.** If you call, a trained counselor will be available to assist you. BARCC also has clinics and referral services.

The BARCC **Hotline:**
617-492-7273 or 1-800-841-8371

The BARCC **Website:** www.BARCC.org

(If you do not live in the Boston area, BARCC counselors can provide you with the names and phone numbers of other rape crisis support centers throughout Massachusetts and the United States).

Also, [redacted] a board certified **Psychiatric** and Mental Health Clinical Nurse **Specialist, is** available for telephone and **email** consultation. [redacted] can be reached at: [redacted] or at [redacted]

Please be sure that you understand ail of the information above before deciding to participate.

If you have questions, you can contact the Principal Investigator, Carol Anne Marchetti, **PhD(c),** RNCS at: [redacted], or at [redacted]

If you are ready to participate, please select "Yes" below.

Thank you!

2. Demographic Variables I

The next two pages ask about your background. Some answers require you to type an answer and others ask you to choose a number or letter. Please answer each question as honestly as possible.

2. What is your age?

○ 18 ○ 19 ○ 20 ○ 21 ○ 22 ○ 23 ○ 24 ○ 25 ○ Other ○ I prefer not to answer

3. What was your approximate age at the time of your last sexual assault?

3. Demographic Variables II

4. How do you describe your gender?

- ◯ Male
- ◯ Female
- ◯ I prefer not to answer
- ◯ Other (please specify)

5. How do you describe your race (please choose all that apply)?

- ☐ White (Non-Hispanic)
- ☐ Hispanic
- ☐ Black (Non-Hispanic)
- ☐ Asian/Pacific Islander
- ☐ Native American
- ☐ I prefer not to answer
- ☐ Other (please specify)

6. Which best describes your highest level of education?

- ◯ Not yet completed high school
- ◯ High school or GED certificate
- ◯ Some college
- ◯ Associate's degree
- ◯ Bachelor's degree
- ◯ Master's degree
- ◯ Doctoral degree
- ◯ I prefer not to answer

7. Which best describes your occupation (please choose all that apply)?

- ☐ High school student
- ☐ College student
- ☐ Part-time employee
- ☐ Full-time employee
- ☐ Unemployed
- ☐ I prefer not to answer

8. Which best describes your yearly income (or your parent's income if they support you financially)?

- ◯ Under $10,000
- ◯ $10,000-$50,000
- ◯ $50,000-$100,000
- ◯ $100,000-$150,000
- ◯ More than $150,000
- ◯ I have no idea
- ◯ I prefer not to answer

4. Assault Characteristics

The next set of questions ask about details regarding your last sexual assault. Some answers require you to type an answer, and others ask you to choose a number or letter. Please answer each question as honestly as possible.

9. Did you tell anyone about the assault?

- ◯ Yes
- ◯ No
- ◯ I prefer not to answer

10. Did you report the assault to the police?

- ◯ Yes
- ◯ No
- ◯ I prefer not to answer

11. If you reported the assault to the police, please estimate when you did so:

- ◯ Less than 24 hours after the assault
- ◯ 1-7 days after the assault
- ◯ 1-4 weeks after the assault
- ◯ 1-6 months after the assault
- ◯ More than six months after the assault
- ◯ I did not report the assault to the police
- ◯ I prefer not to answer

12. If you reported the assault to the police, please choose one statement that best describes the status of the case:

- ◯ No one was ever arrested
- ◯ Someone was arrested, but the case was dropped before it went to trial
- ◯ Someone was arrested and is awaiting trial or is being tried right now
- ◯ Someone was arrested and found not guilty
- ◯ Someone was arrested and found guilty
- ◯ The assault was not reported to the police
- ◯ I prefer not to answer

13. How would you describe your relationship to the assailant (please select one)?

- ◯ Stranger
- ◯ Acquaintance
- ◯ Friend
- ◯ Date
- ◯ Boyfriend or Girlfriend
- ◯ Spouse
- ◯ Relative
- ◯ I prefer not to answer
- ◯ Other (please describe)

14. Did you receive any physical injuries during the assault (please check all that apply)?

- ☐ Bruises
- ☐ Scrapes/Cuts
- ☐ Head injury
- ☐ Muscle/Bone injuries
- ☐ Genital injuries
- ☐ Injuries requiring hospitalization
- ☐ I did not sustain any physical injuries
- ☐ I prefer not to answer

15. Did the assailant use any of the following threats or weapons during the assault (please check all that apply)?

- [ ] Verbal threats
- [ ] Choking
- [ ] Bites
- [ ] Hitting
- [ ] Burns
- [ ] Gun
- [ ] Knife
- [ ] Blunt object
- [ ] Chemicals/Drugs
- [ ] No threats or weapons were used
- [ ] I prefer not to answer
- [ ] Other (please describe)

16. Did you have any of the following health complications related to the assault (please check all that apply)?

- [ ] Unplanned pregnancy
- [ ] Sexually transmitted infection (STI)
- [ ] Anxiety
- [ ] Suicidal thoughts or attempts
- [ ] Weight loss/gain
- [ ] No, I did not have any health complications that I know of
- [ ] I prefer not to answer
- [ ] Other (please describe)

17. Did you have any other complications related to the assault (please choose all that apply)?

- [ ] Unable to work
- [ ] Economic costs (e.g., lost wages, legal costs)
- [ ] Social costs (e.g., harm to relationships, fear of intimacy)
- [ ] No, I did not have any other complications that I know of
- [ ] I prefer not to answer
- [ ] Other (please specify)

18. Did you get professional health care treatment following the assault?

- ◯ Yes
- ◯ No
- ◯ I prefer not to answer

5. Decision Regret Scale (Copyright 1996 O'Connor)

19. Please reflect on the decision you made regarding whether or not to report your last sexual assault to the police. Please show how strongly you agree or disagree with these statements by making a choice from "Strongly Agree" to "Strongly Disagree". Please choose which response best fits your views about your decision.

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	I prefer not to answer
a. It was the right decision	○	○	○	○	○	○
b. I regret the choice that was made	○	○	○	○	○	○
c. I would go for the same choice if I had it to do over again	○	○	○	○	○	○
d. The choice did me a lot of harm	○	○	○	○	○	○
e. The decision was a wise one	○	○	○	○	○	○

6. Feelings Questionnaire (PHQ-9; Copyright 2005 Pfizer Inc.)

The next group of questions ask about your feelings. Please pick the number that best describes your feelings by choosing one response from "Not at All" to "Nearly Every Day."

20. Over the last 2 weeks, how often have you been bothered by any of the following problems?

	Not at All	Several Days	More Than Half the Days	Nearly Every Day	I Prefer Not to Answer
a. Little interest or pleasure in doing things	◯	◯	◯	◯	◯
b. Feeling down, depressed, or hopeless	◯	◯	◯	◯	◯
c. Trouble falling asleep, or sleeping too much	◯	◯	◯	◯	◯
d. Feeling tired or having little energy	◯	◯	◯	◯	◯
e. Poor appetite or overeating	◯	◯	◯	◯	◯
f. Feeling bad about yourself, or that you are a failure, or have let yourself or your family down	◯	◯	◯	◯	◯
g. Trouble concentrating on things, such as reading the newspaper or watching television	◯	◯	◯	◯	◯
h. Moving or speaking so slowly that other people could have noticed. Or the opposite--being so fidgety or restless that you have been moving around a lot more than usual	◯	◯	◯	◯	◯
i. Thoughts that you would be better off dead, or of hurting yourself in some way	◯	◯	◯	◯	◯

21. If you checked off any problem on the last 9 questions, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

◯ Not Difficult at All ◯ Somewhat Difficult ◯ Very Difficult ◯ Extremely Difficult ◯ Not Applicable ◯ I Prefer Not to Answer

7. Stress and Trauma (Weather, Liz, Huska & Keane, 1993)

22. Below is a list of problems and complaints that people sometimes have in response to stressful life experiences. Please read each one carefully, then select which response best describes how much you have been bothered by that problem in the past month.

	Not a Bit	A Little Bit	Moderately	Quite a Bit	Extremely	I Prefer Not to Answer
a. Repeated, disturbing memories, thoughts, or images of the sexual assault?	○	○	○	○	○	○
b. Repeated, disturbing dreams of the sexual assault?	○	○	○	○	○	○
c. Suddenly acting or feeling as if the sexual assault was happening again?	○	○	○	○	○	○
d. Feeling very upset when something reminded you of the sexual assault?	○	○	○	○	○	○
e. Having physical reactions (heart pounding, trouble breathing, sweating) when something reminded you of the sexual assault?	○	○	○	○	○	○
f. Avoiding thinking or talking about the sexual assault or avoiding having feelings related to it?	○	○	○	○	○	○
g. Avoiding activities or situations because they reminded you of the sexual assault?	○	○	○	○	○	○
h. Trouble remembering important parts of the sexual assault?	○	○	○	○	○	○
i. Loss of interest in activities that you used to enjoy?	○	○	○	○	○	○
j. Feeling distant or cut off from people?	○	○	○	○	○	○
k. Feeling emotionally numb or being unable to have loving feelings for those close to you?	○	○	○	○	○	○
l. Feeling as if your future will somehow be cut short?	○	○	○	○	○	○
m. Trouble falling or staying asleep?	○	○	○	○	○	○
n. Feeling irritable or having angry outbursts?	○	○	○	○	○	○
o. Having difficulty concentrating?	○	○	○	○	○	○
p. Being "super-alert", or watchful, or on guard?	○	○	○	○	○	○
q. Feeling jumpy or easily startled?	○	○	○	○	○	○

8. Alcohol and Medication/Drug Use (Sokol, Martier & Ager, 1989; Skinner, ...

The next group of questions ask about your alcohol and medication/drug use.

23. Please choose either "Yes" or No" or indicate that you would prefer not to answer the question.

	Yes	No	I prefer not to answer
a. Does it take more than three drinks to make you feel high?	◯	◯	◯
b. Have you ever been annoyed by people's criticism of your drinking?	◯	◯	◯
c. Are you trying to cut down on your drinking?	◯	◯	◯
d. Have you ever used alcohol as an eye-opener in the morning?	◯	◯	◯
e. Do you take any medications (prescribed or purchased over-the-counter)?	◯	◯	◯
f. Do you use any drugs other than medications that are required for medical/psychiatric reasons?	◯	◯	◯

If applicable, please list all medications/drugs that you take, and please indicate how much and how often you use each one:

9. Sexual Experiences Survey (SES-SFV; Koss et al., 2007)

The following questions concern sexual experiences that you may have had that were unwanted. We know that these are personal questions, so we do not ask your name or other identifying information. As is true with the rest of this survey, we want to remind you that your information is completely anonymous. We hope that this helps you to feel comfortable answering each question honestly.

Please select the number of times that each experience has happened to you. If several experiences happened on the same occasion—for example, if one night someone told you some lies AND had sex with you when you were drunk, you would select a number under both categories, "a" and "c". "The past 5 years" refers to the past 5 years going back from today.

24. Someone fondled, kissed, or rubbed up against the private areas of my body (lips, breast/chest, crotch or bottom) or removed some of my clothes without my consent (but did not attempt sexual penetration) by:

	0 times	1 time	2 times	3 or more times	I prefer not to answer
a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	◯	◯	◯	◯	◯
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	◯	◯	◯	◯	◯
c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	◯	◯	◯	◯	◯
d. Threatening to physically harm me or someone close to me.	◯	◯	◯	◯	◯
e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	◯	◯	◯	◯	◯

25. Someone had oral sex with me or made me have oral sex with them without my consent by:

	0 times	1 time	2 times	3 or more times	I prefer not to answer
a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	◯	◯	◯	◯	◯
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	◯	◯	◯	◯	◯
c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	◯	◯	◯	◯	◯
d. Threatening to physically harm me or someone close to me.	◯	◯	◯	◯	◯
e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	◯	◯	◯	◯	◯

26. If you are a male, please skip to Question 27.
A man put his penis into my vagina, or someone inserted fingers or objects without my consent by:

	0 times	1 time	2 times	3 or more times	I prefer not to answer
a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	○	○	○	○	○
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	○	○	○	○	○
c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	○	○	○	○	○
d. Threatening to physically harm me or someone close to me.	○	○	○	○	○
e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	○	○	○	○	○

27. A man put his penis into my bottom, or someone inserted fingers or objects without my consent by:

	0 times	1 time	2 times	3 or more times	I prefer not to answer
a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	○	○	○	○	○
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	○	○	○	○	○
c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	○	○	○	○	○
d. Threatening to physically harm me or someone close to me.	○	○	○	○	○
e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	○	○	○	○	○

28. Even though it did not happen, someone TRIED to have oral sex with me, or made me have oral sex with them without my consent by:

	0 times	1 time	2 times	3 or more times	I prefer not to answer
a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	○	○	○	○	○
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	○	○	○	○	○
c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	○	○	○	○	○
d. Threatening to physically harm me or someone close to me.	○	○	○	○	○
e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	○	○	○	○	○

29. If you are a male, please skip to Question 30.
Even though it did not happen, a man TRIED to put his penis into my vagina, or someone tried to stick in fingers or objects without my consent by:

	0 times	1 time	2 times	3 or more times	I prefer not to answer
a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	◯	◯	◯	◯	◯
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	◯	◯	◯	◯	◯
c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	◯	◯	◯	◯	◯
d. Threatening to physically harm me or someone close to me.	◯	◯	◯	◯	◯
e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	◯	◯	◯	◯	◯

30. Even though it did not happen, a man TRIED to put his penis into my bottom, or someone tried to stick in objects or fingers without my consent by:

	0 times	1 time	2 times	3 or more times	I prefer not to answer
a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	◯	◯	◯	◯	◯
b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	◯	◯	◯	◯	◯
c. Taking advantage of me when I was too drunk or out of it to stop what was happening.	◯	◯	◯	◯	◯
d. Threatening to physically harm me or someone close to me.	◯	◯	◯	◯	◯
e. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	◯	◯	◯	◯	◯

31. Have you ever been raped?

◯ Yes
◯ No
◯ Unsure
◯ I prefer not to answer this question

32. Did any of the experiences described in this survey happen to you one or more times?

◯ Yes
◯ No
◯ I prefer not to answer this question

33. What was the sex of the person or persons who did them to you?

- ◯ I reported no experiences
- ◯ Female only
- ◯ Male only
- ◯ Both (Females & Males)
- ◯ Unsure
- ◯ I prefer not to answer

10. Thank you for participating in this survey!

The survey has ended either because you answered all the questions, have chosen to stop, or because you did not meet the criteria to be included in the study. Thank you very much for your time and effort.

I want you to be aware of free, comprehensive, confidential services that are available if you want to talk to someone about your sexual assault. The Boston Area Rape Crisis Center (BARCC) offers a telephone hotline that is open 7 days a week, 24 hours a day. If you call, a trained counselor will be available to assist you. BARCC also has a website, clinics, and referral services.

The BARCC Hotline:
617-492-7273 or 1-800-841-8371

The BARCC website:
www.BARCC.org

(If you do not live in the Boston area, BARCC counselors can provide you with the names and phone numbers of other rape crisis centers throughout Massachusetts and the United States).

Also, Sandra Hannon Engel, PhD(c), RNCS, a Psychiatric and Mental Health Clinical Nurse Specialist, is available for telephone and email consultation and referral.
Sandra can be reached at:
781-829-7000, or at hannonen@bc.edu

Carol Anne Marchetti, PhD(c), RNCS, SANE, the principal investigator of this study, can be reached at:
781-526-4369, or at sexualassaultsurvey@gmail.com

If you have any questions or concerns regarding this study, or the researcher conducting the study, please feel free to contact:
The Office of Human Research Participant Protections at Boston College at 617-552-4778, or at irb@bc.edu

34. Please feel free to use the space below to write about any aspect of the study. You do not need to provide your name or any other personal information. If you choose to identify yourself then the questionnaire will no longer be anonymous. Also, you should know that the investigator is mandated by law to report sexual assault, which means that if you disclose that you are a child (less than 18 years); an elderly person (60 years or more); or a physically or mentally disabled individual who has been sexually assaulted, the investigator is required to report this information to a state agency.
Thank you for participating in the study!

Appendix B

Pearson Correlation Matrix: Continuous, Independent Variables and Regret

Variable	Pearson *r* correlation Sig. level	Regret	Age	Depress	PTSD	Alcohol
Regret		1.0000				
Age		-0.0876 0.4455	1.0000			
Depress		0.1251 0.2752	-0.0568 0.6215	1.0000		
PTSD		0.1427 0.2125	-0.1139 0.3207	0.7169* 0.0000	1.0000	
Alcohol		0.0208 0.8566	0.0351 0.7600	0.2283 0.0444	0.1600 0.1618	1.0000

*p < .001 (Bonferroni-adjusted alpha)

Appendix C

Spearman Rho Correlation Matrix: Independent Variables and Regret

Variable	Spearman's rho correlation Significance level	*p < .001(Bonferroni-adjusted alpha)

	Regret	Age	Depress	PTSD	Alcohol	Disclose	Report	Stranger	Acquaint	Friend	BF/GF/D.	Physical
Regret	1.0000											
Age	-0.0557	1.0000										
	0.6280											
Depress	0.1028	-0.0758	1.0000									
	0.3705	0.5096|									
PTSD	0.1107	-0.0863	0.7299*	1.0000								
	0.3347	0.4527	0.0000 |									
TACE	0.0760	0.0374	0.2266	0.1861	1.0000							
	0.5086	0.7453	0.0460	0.1027								
Disclose	-0.1152	0.0136	0.0946	0.1329	-0.0101	1.0000						
	0.3152	0.9061	0.4101	0.2462	0.9304							
Report	-0.3741*	0.0386	-0.0874	0.1330	-0.1455	0.2703	1.0000					
	0.0007	0.7373	0.4470	0.2456	0.2036	0.0167						
Stranger	-0.4272*	0.1731	-0.1147	-0.1429	0.0219	-0.0538	0.3825*	1.0000				
	0.0001	0.1296	0.3172	0.2118	0.8488	0.6397	0.0005					
Acquaint	0.1370	-0.1260	0.0013	0.0931	0.1882	-0.0412	-0.0533	-0.2803	1.0000			
	0.2318	0.2717	0.9912	0.4177	0.0989	0.7205	0.6430	0.0129				
Friend	-0.0410	-0.0981	-0.1130	-0.0426	-0.0831	0.0310	0.0807	-0.1812	-0.2540	1.0000		
	0.7216	0.3930	0.3245	0.7114	0.4696	0.7873	0.4823	0.1124	0.0249			
BF/GF/Date	0.1517	-0.0343	0.0920	-0.0636	-0.0222	0.1026	-0.2830	-0.2449	-0.3433*	-0.2219	1.0000	
	0.1849	0.7654	0.4230	0.5804	0.8471	0.3715	0.0120	0.0307	0.0021	0.0508		
Physical	-0.0534	0.0482	0.2909	0.2745	0.1384	-0.1883	0.0279	0.1865	-0.0015	-0.1882	-0.1475	1.0000
	0.6426	0.6750	0.0098	0.0150	0.2270	0.0988	0.8087	0.1021	0.9897	0.0990	0.1974	

	Regret	Age	Depress	PTSD	Alcohol	Disclose	Report	Stranger	Acquaint	Friend	BF/GF/D.	Physical
Genital	0.1302	0.0762	0.2297	0.2546	-0.0169	-0.1819	-0.0558	0.1351	-0.2473	-0.1994	0.1455	0.3766*
	0.2558	0.5070	0.0431	0.0245	0.8832	0.1110	0.6275	0.2381	0.0290	0.0801	0.2039	0.0007
Verbal	0.1626	0.0495	0.2180	0.1642	0.0766	-0.1940	-0.2094	0.0745	-0.1092	-0.1105	-0.1674	0.4605*
	0.1549	0.6668	0.0552	0.1509	0.5052	0.0888	0.0658	0.5166	0.3412	0.3355	0.1430	0.0000
ChoBitHit	0.0044	0.1643	0.2413	0.1012	0.1768	-0.2945	-0.1909	0.1635	-0.0929	-0.2620	-0.0205	0.4895*
	0.9696	0.1506	0.0333	0.3779	0.1215	0.0089	0.0942	0.1527	0.4184	0.0205	0.8584	0.0000
Weapon	0.0171	0.0389	-0.0034	0.1210	-0.1695	0.0185	0.2726	0.2401	-0.0699	0.0650	-0.2100	0.3039
	0.8821	0.7350	0.9764	0.2913	0.1379	0.8725	0.0157	0.0342	0.5430	0.5719	0.0649	0.0068
Chemical	-0.0810	0.2005	0.2228	0.2324	0.1477	-0.0402	0.1375	0.2390	0.0780	-0.0935	-0.2562	0.2891
	0.4806	0.0784	0.0499	0.0406	0.1970	0.7266	0.2300	0.0351	0.4970	0.4154	0.0236	0.0103
Pregnancy	-0.0668	0.0531	0.0613	0.1784	0.0776	0.0586	0.0477	-0.0725	-0.1017	0.1673	-0.0889	0.1945
	0.5612	0.6444	0.5938	0.1180	0.4994	0.6104	0.6784	0.5279	0.3757	0.1431	0.4392	0.0879
STI	-0.0569	0.0433	-0.0168	0.1821	0.0397	-0.0980	-0.0528	-0.1040	0.1126	0.0728	-0.1273	-0.1939
	0.6206	0.7067	0.8839	0.1105	0.7298	0.3935	0.6461	0.3650	0.3263	0.5265	0.2666	0.0889
Anxiety	0.1953	-0.1539	0.2260	0.2132	-0.0105	0.0684	0.0228	-0.0953	0.0304	0.0707	-0.0195	0.2834
	0.0866	0.1784	0.0467	0.0609	0.9271	0.5516	0.8430	0.4063	0.7918	0.5386	0.8657	0.0119
Suicide	-0.0217	-0.1787	0.3311	0.4372*	-0.0580	0.0929	0.2722	-0.1380	-0.0088	0.2160	-0.1409	0.2212
	0.8501	0.1174	0.0031	0.0001	0.6139	0.4186	0.0159	0.2282	0.9391	0.0575	0.2187	0.0516
Weight	0.2643	0.0446	0.1928	0.1750	0.1344	0.0309	0.1261	0.1835	0.1301	-0.0265	0.0140	0.1257
	0.0194	0.6984	0.0909	0.1255	0.2407	0.7884	0.2712	0.1077	0.2563	0.8182	0.9028	0.2729
No comps	-0.0939	0.1930	-0.2592	-0.3392	-0.0253	0.0185	-0.1271	0.0343	0.0153	-0.1554	0.1540	-0.3198
	0.4136	0.0905	0.0219	0.0024	0.8257	0.8725	0.2675	0.7656	0.8943	0.1743	0.1782	0.0043
Work	0.0505	0.0603	0.2168	0.2974	-0.0707	-0.1009	0.1876	-0.0694	-0.1239	-0.1247	-0.1417	0.1910
	0.6609	0.6002	0.0566	0.0082	0.5382	0.3792	0.1001	0.5458	0.2800	0.2768	0.2158	0.0939
Economic	0.1653	0.0738	0.3958*	0.2708	0.1263	-0.2909	0.0513	0.0000	-0.0304	-0.0707	-0.1492	0.2223
	0.1481	0.5210	0.0003	0.0165	0.2706	0.0098	0.6557	1.0000	0.7918	0.5386	0.1923	0.0505
Social	0.1355	-0.0448	0.3314	0.2946	0.0990	0.1981	-0.0581	-0.0972	-0.0142	-0.0538	0.0680	0.1246
	0.2370	0.6966	0.0030	0.0088	0.3883	0.0820	0.6134	0.3972	0.9021	0.6402	0.5539	0.2769
Treatment	-0.3117	0.2975	0.0074	0.0239	-0.0134	0.3705	0.4086*	0.2294	-0.0731	0.0265	-0.0749	0.1872
	0.0055	0.0082	0.9486	0.8352	0.9070	0.0008	0.0002	0.0433	0.5249	0.8182	0.5144	0.1008
Meds	0.2078	0.1239	0.0080	0.1225	0.1140	0.1112	-0.1412	-0.0918	0.0161	0.1209	0.0140	-0.0308
	0.0679	0.2800	0.9447	0.2852	0.3205	0.3326	0.2175	0.4243	0.8889	0.2916	0.9028	0.7893

	Genital	Verbal	Choke	Weapon	Chemical	Pregnancy	STI	Anxiety	Suicide	Weight	No comps	Work
Genital	1.0000											
Verbal	0.1969	1.0000										
	0.0840											
Choke	0.2788	0.4827*	1.0000									
	0.0134	0.0000										
Weapon	0.0653	0.1598	0.0884	1.0000								
	0.5699	0.1623	0.4415									
Chemical	0.1083	0.1225	0.1371	0.0205	1.0000							
	0.3453	0.2853	0.2312	0.8586								
Pregnancy	-0.1114	0.0676	0.0730	0.1804	0.1355	1.0000						
	0.3315	0.5565	0.5255	0.1140	0.2369							
STI	-0.0351	-0.0291	-0.1503	-0.0892	0.0427	-0.0377	1.0000					
	0.7601	0.8006	0.1889	0.4376	0.7104	0.7430						
Anxiety	0.1406	0.0533	-0.1139	0.1635	0.1068	0.0692	0.0991	1.0000				
	0.2196	0.6430	0.3208	0.1526	0.3519	0.5473	0.3878					
Suicide	0.1908	0.1072	0.0217	0.1065	0.1701	0.1752	0.1345	0.2522	1.0000			
	0.0943	0.3504	0.8505	0.3533	0.1365	0.1249	0.2403	0.0259				
Weight	0.1001	-0.0940	-0.0115	0.0866	0.0788	-0.1581	-0.1103	0.3445	0.0237	1.0000		
	0.3834	0.4128	0.9201	0.4511	0.4927	0.1668	0.3363	0.0020	0.8365			
No comps	-0.0990	-0.0895	0.0884	-0.1471	-0.1794	-0.0622	-0.0892	-0.7931*	-0.3550	-0.2971	1.0000	
	0.3884	0.4359	0.4415	0.1989	0.1161	0.5885	0.4376	0.0000	0.0014	0.0083		
Work	0.1698	0.1190	0.0672	0.0762	0.1577	0.1108	0.0180	0.0530	0.2587	0.0446	-0.1096	1.0000
	0.1373	0.2993	0.5587	0.5072	0.1679	0.3341	0.8754	0.6451	0.0222	0.6982	0.3397	
Economic	0.3924*	0.1007	0.1918	-0.0572	0.1709	0.1556	-0.0991	0.0833	0.3180	0.1531	-0.1635	0.4634*
	0.0004	0.3805	0.0925	0.6187	0.1346	0.1736	0.3878	0.4682	0.0045	0.1808	0.1526	0.0000
Social	0.0964	0.2174	0.2052	0.0167	0.0041	-0.1108	-0.0180	0.2052	0.3019	0.2039	-0.1691	0.1283
	0.4011	0.0559	0.0715	0.8848	0.9712	0.3341	0.8754	0.0715	0.0072	0.0734	0.1389	0.2631
Treatment	0.0648	-0.0727	0.0115	0.2971	0.1217	0.1581	-0.1222	0.1531	0.2850	0.1289	-0.0866	0.1418
	0.5728	0.5272	0.9201	0.0083	0.2886	0.1668	0.2863	0.1808	0.0114	0.2605	0.4511	0.2156
Meds	0.2100	0.1282	-0.0115	0.0866	0.0788	-0.1581	0.0060	0.1312	0.0752	0.0763	0.0098	-0.0175
	0.0650	0.2631	0.9201	0.4511	0.4927	0.1668	0.9587	0.2521	0.5129	0.5066	0.9319	0.8790

	Economic	Social	Treatment	Meds
Economic	1.0000			
Social	0.0530	1.0000		
	0.6451			
Treatment	-0.0109	0.2310	1.0000	
	0.9243	0.0419		
Meds	0.0109	0.1418	0.1803	1.0000
	0.9243	0.2156	0.1	